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**S. IRRIGATION DETAILS**

IRRIGATION WARRANTY DETAIL

BACKFLOW PREVENTOR (3/4" – 2")

BACKFLOW PREVENTOR (2 ½" – 6")

BACKFLOW PREVENTOR ENCLOSURE

DRIP BUBBLER

DRIP FILTER

DRIP REMOTE CONTROL VALVE WITH PRESSURE REGULATOR

END FLUSHING PLUG

FLOW SENSOR

GATE VALVE (3/4" – 3")

GATE VALVE (4" – 6")

HIGH GAIN ANTENNA INSTALLATION

MASTER REMOTE CONTROL VALVE

METERED CONTROLLER ENCLOSURE – FRONT VIEW

METERED CONTROLLER ENCLOSURE – SIDE VIEW

PEDESTAL MOUNT CONTROLLER – COUNTY MAINTAINED

PEDESTAL MOUNT CONTROLLER – NON-COUNTY MAINTAINED

PRESSURE REGULATOR

QUICK COUPLER VALVE

REMOTE CONTROL VALVE

SHRUB ROTOR ON RISER

THRUST BLOCK

#### LANDSCAPE IRRIGATION SYSTEM WARRANTY

WE HEREBY GUARANTEE THAT THE LANDSCAPE IRRIGATION SYSTEM WE HAVE FURNISHED AND INSTALLED IS FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP, AND THE WORK HAS BEEN COMPLETED IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLANS AND THE CONTRA COSTA COUNTY PUBLIC WORKS DEPARTMENT LANDSCAPE STANDARDS. WE AGREE TO REPAIR OR REPLACE ANY DEFECTS IN MATERIAL OR WORKMANSHIP, ANY SETTLING OF BACKFILLED TRENCHES, WHICH MAY DEVELOP DURING THE PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE. FURTHER, WE AGREE TO REPAIR OR REPLACE ANY DAMAGE CAUSED BY ANY DEFECTS IN THE LANDSCAPE IRRIGATION SYSTEM OR RESULTING FROM THE REPAIRING OR REPLACING OF SUCH DEFECTS AT NO ADDITIONAL COST TO THE COUNTY. ORDINARY WEAR AND TEAR, UNUSUAL ABUSE OR NEGLIGENCE ARE EXCEPTED. WE SHALL MAKE SUCH REPAIRS OR REPLACEMENTS, INCLUDING COMPLETE RESTORATION OF ALL DAMAGED PLANTING, PAVING, OR OTHER IMPROVEMENTS OF ANY KIND WITHIN 10 DAYS OF RECEIVING WRITTEN NOTIFICATION FROM THE COUNTY. IN THE EVENT OF OUR FAILURE TO MAKE SUCH REPAIRS OR REPLACEMENTS WITHIN 10 DAYS OF WRITTEN NOTICE FROM THE COUNTY, WE AUTHORIZE THE COUNTY TO PROCEED TO HAVE SAID REPAIRS OR REPLACEMENTS MADE AT OUR EXPENSE AND WE WILL PAY THE COSTS AND CHARGES THEREFORE UPON DEMAND.

PROJECT:

LOCATION:

CONTRACTOR:

ADDRESS:

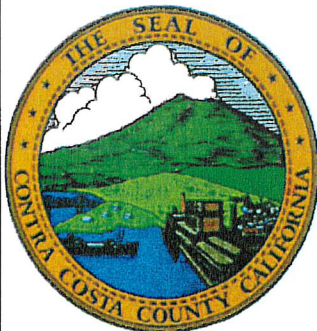
TELEPHONE:

LICENSE NO:

GUARANTEE PROVIDED TO: CONTRA COSTA COUNTY  
PUBLIC WORKS DEPARTMENT  
255 GLACIER DRIVE  
MARTINEZ, CA 94553-4825

AUTHORIZED REPRESENTATIVE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_



#### IRRIGATION WARRANTY DETAIL

Approved  
by:

*[Signature]*

Scale:  
N.T.S.

Date: 12/18/2017

*4/24/18*

Drawing:

**NOTES:**

EVENLY COAT G.I. FITTINGS EXPOSED TO SOIL AND CONCRETE WITH 3M SCOTCH WRAP PIPE PRIMER AND THEN WRAP WITH 3M SCOTCH WRAP NO. 51 BLACK TAPE (3/4" OVERLAP).

LOCATE BACKFLOW PREVENTOR WITHIN 24" OF WATER METER OR AS CLOSE AS FIELD CONDITIONS WILL ALLOW.

REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY (3/4" THROUGH 2")

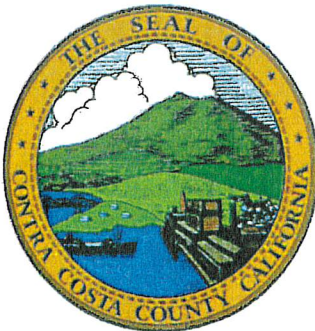
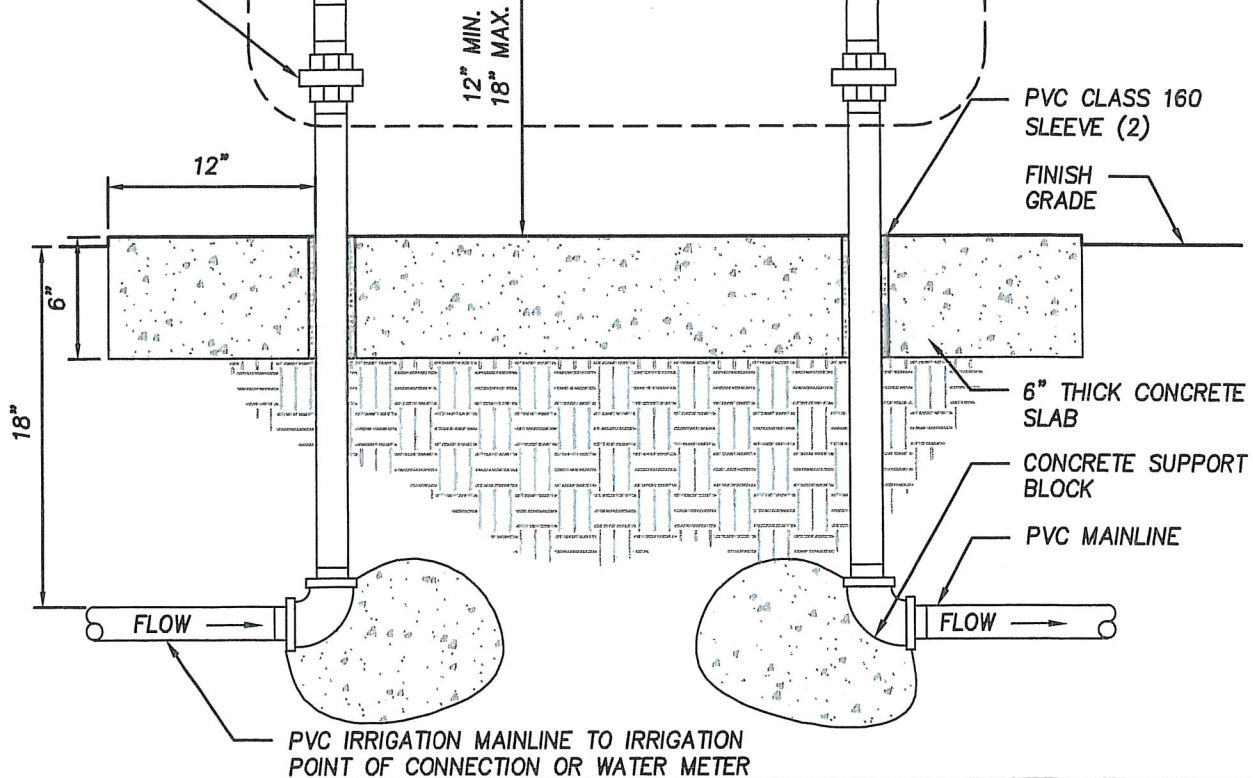
G.I. FITTINGS (AS REQUIRED)

WYE STRAINER

G.I. UNION

SHUTOFF VALVE (2)

BACKFLOW FREEZE PROTECTION COVER OR GUARD SHACK



## BACKFLOW PREVENTOR (3/4"-2")

Approved  
by:

*Waf*

Scale:  
N.T.S.

Date: 12/18/2017

4/24/18

Drawing:



LOCATE BACKFLOW PREVENTER WITHIN 24" OF WATER METER  
OR AS CLOSE AS FIELD CONDITIONS WILL ALLOW.

LOCATE BACKFLOW PREVENTER WITHIN 24" OF WATER METER OR AS CLOSE AS FIELD CONDITIONS WILL ALLOW.

INSTALL GASKET AND BOLT KIT BETWEEN FLANGED FITTINGS AS RECOMMENDED BY FITTING MANUFACTURER.

BACKFLOW FREEZE PROTECTION COVER

SHUT OFF VALVE

BACKFLOW PREVENTER (2 1/2" THROUGH 6")

CAST IRON SPOOL

CAST IRON 90° ELL FLANGE x FLANGE

CAST IRON SPOOL (LENGTH AS REQUIRED)

SUPPORT RISER (2)

PVC CLASS 160 SLEEVE (2)

6" THICK CONCRETE SLAB

FINISH GRADE

12" MIN. 30" MAX.

12"

6"

18"

CONCRETE THRUST BLOCK (2)

CAST IRON 90° FLANGE x SLIP ELBOW (2); FITTING FOR PVC

PVC MAINLINE

PVC IRRIGATION MAIN LINE TO IRRIGATION POINT OF CONNECTION OR WATER METER

FLOW

FLOW



Approved  
by:

Waf

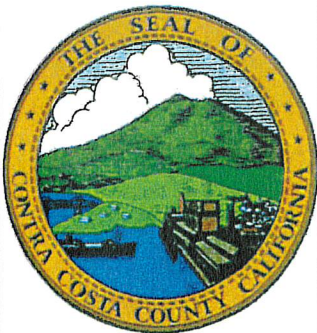
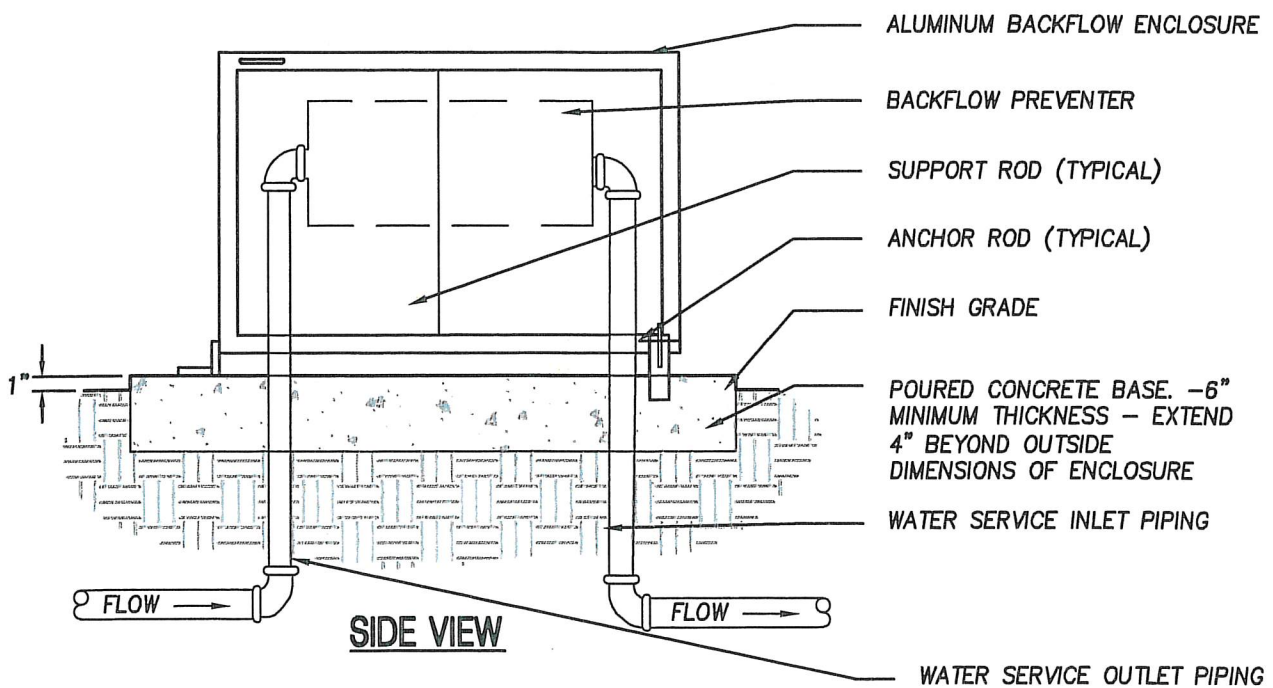
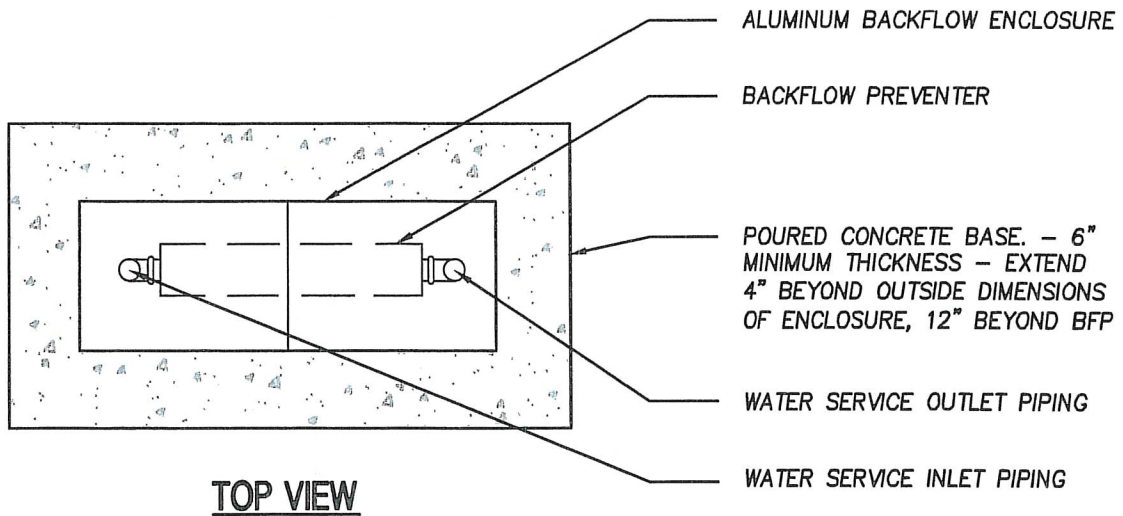
N.T.S.

Date:12/18/2017

 $4\frac{1}{2} \quad 4\frac{1}{18}$ 

### Drawing:





## BACKFLOW PREVENTOR ENCLOSURE

Approved  
by:

*[Signature]*

Scale:  
N.T.S.

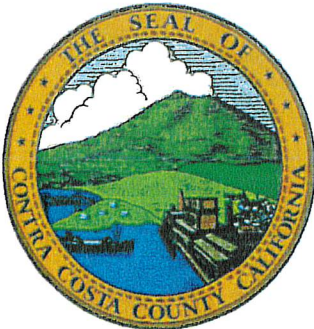
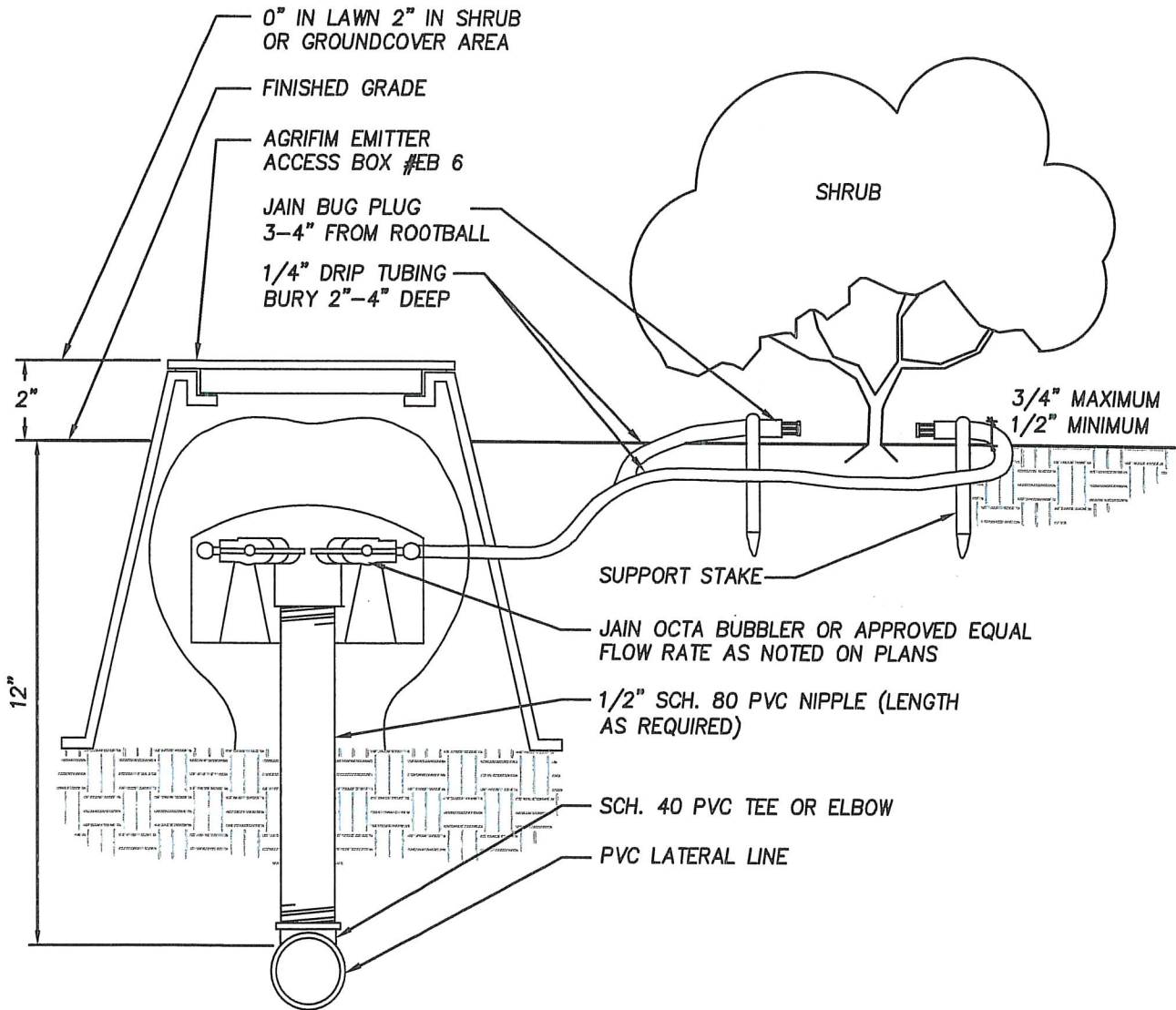
Date: 12/18/2017

4/24/18

Drawing:

**NOTES:**

1. INSTALL JAIN PORT PLUG PLUGS (BA-PP-OB) ON ALL UNUSED PORTS.
2. APPLY TEFLON TAPE TO ALL THREADED CONNECTIONS.
3. REFER TO PLANS FOR NUMBER OF OUTLETS PER PLANT.
4. BURY ALL 1/4" TUBING BETWEEN 2-4" BELOW GRADE. COUNTY WILL NOT ACCEPT ANY PROJECTS WITH TUBING INSTALLED ON-GRADE UNDER MULCH



## DRIP BUBBLER DETAIL

Approved  
by:

*[Signature]*

Scale:  
N.T.S.

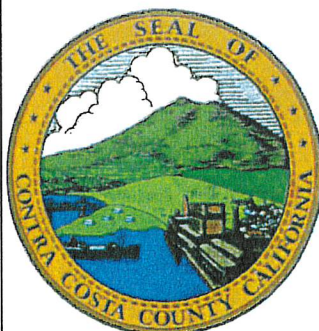
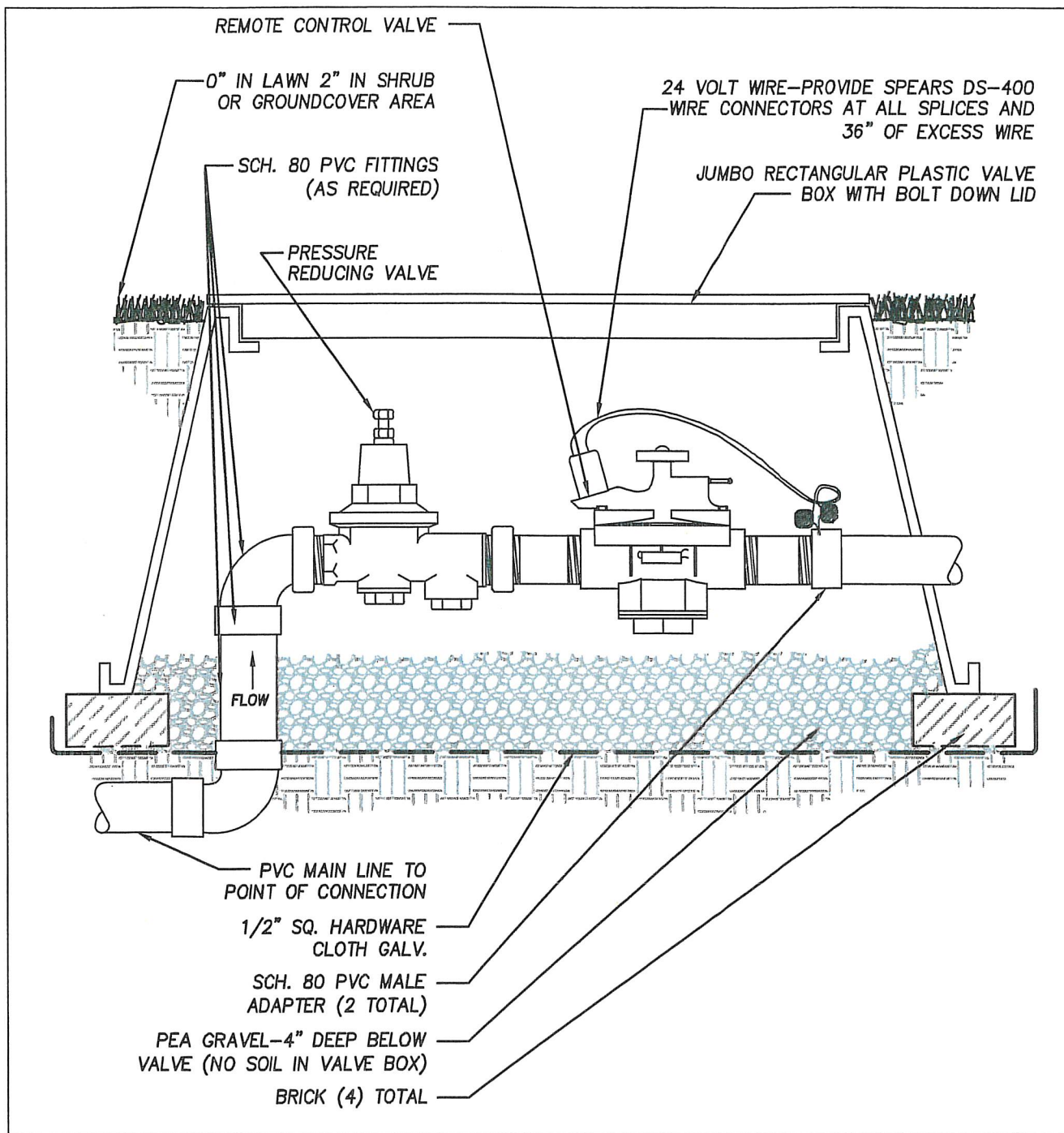
Date: 12/18/2017

*4/24/18*

Drawing:







## DRIP REMOTE CONTROL VALVE WITH PRESSURE REGULATOR

Approved  
by:

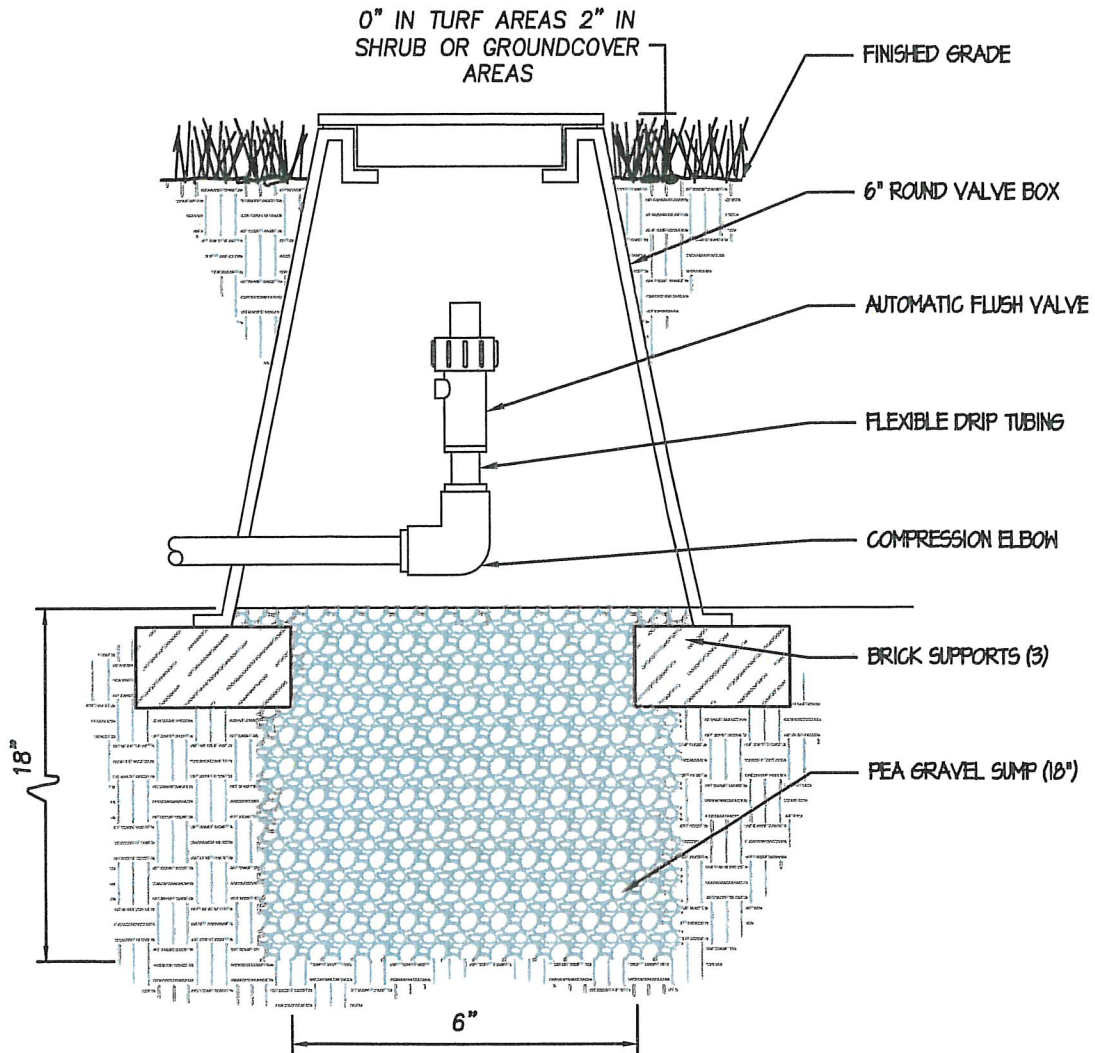
*U. J.*

Scale:  
N.T.S.

Date: 12/18/2017

4/24/18

Drawing:



## DRIP END FLUSH PLUG

Approved  
by:

*WJ*

Scale:  
N.T.S.

Date: 12/18/2017

4/24/18

Drawing:





Approved  
by:

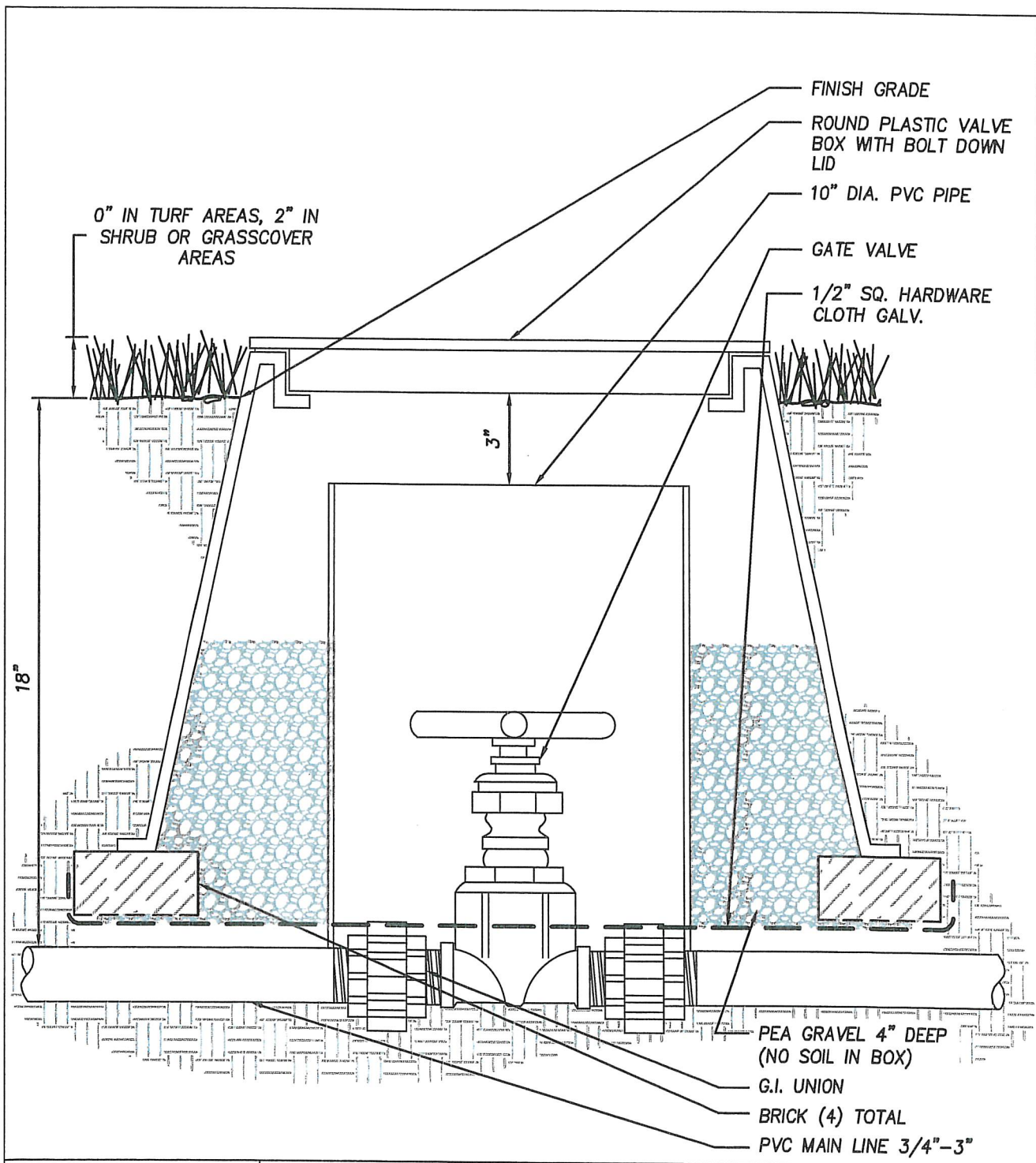
*Handwritten signature*

4/24/18

Scale: N.T.S.

**Drawing:**





## GATE VALVE [3/4"-3"]



Approved  
by:

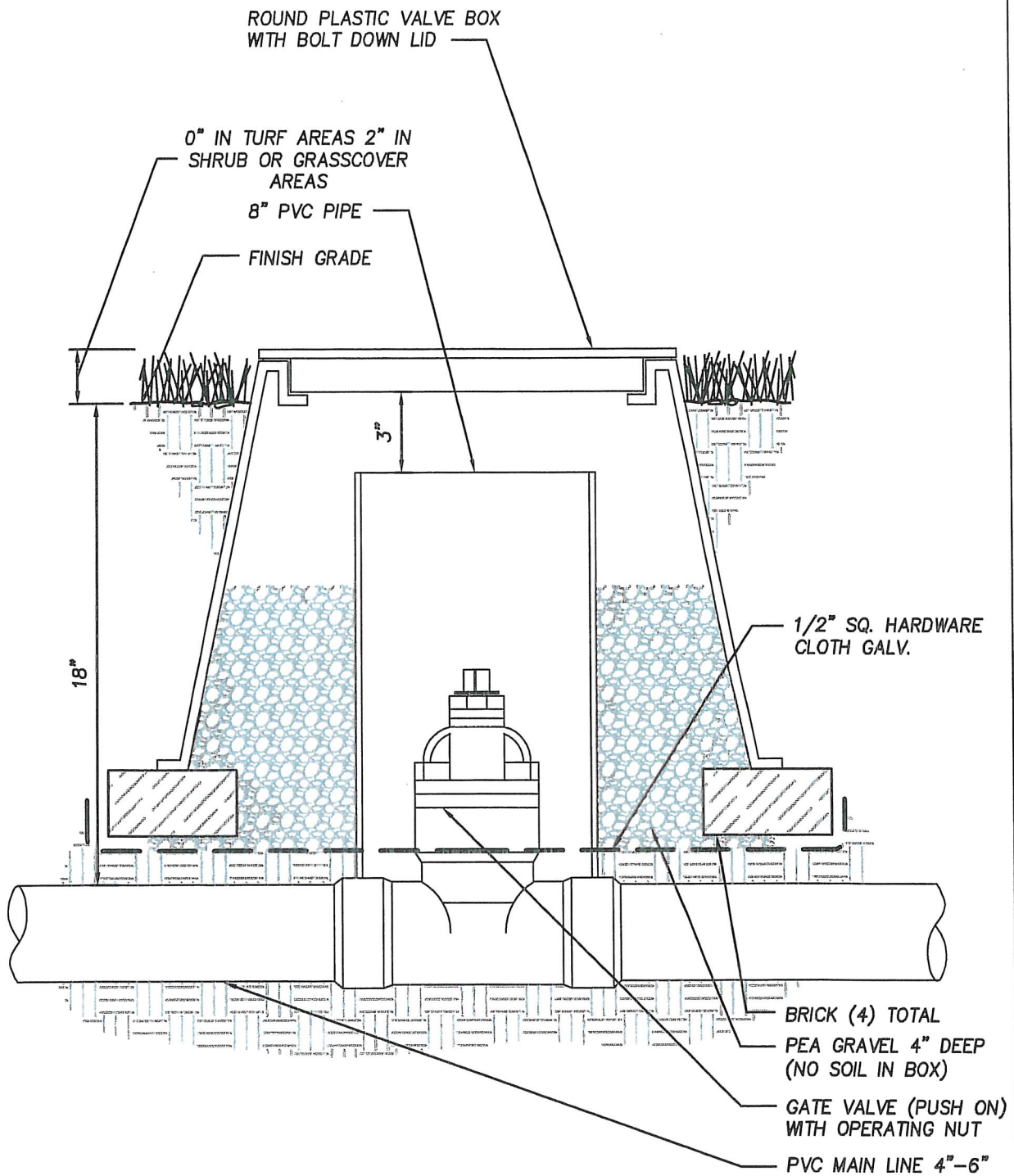
*[Signature]*

Scale:  
N.T.S.

Date: 12/18/2017

4/24/18

Drawing:



## GATE VALVE [4"-6"]



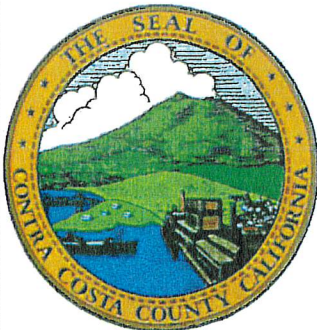
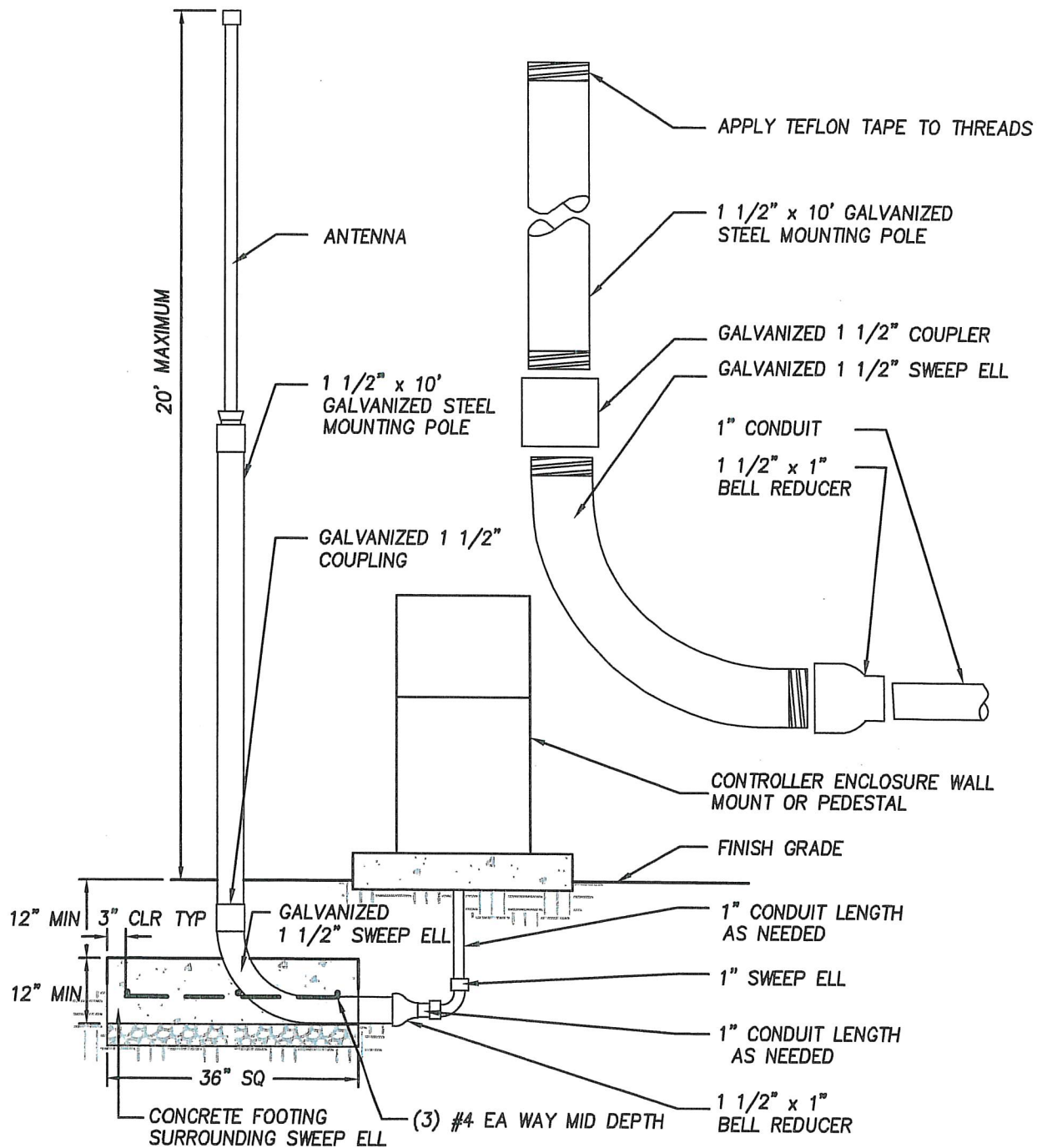
Approved  
by:

Date: 12/18/2017

*[Signature]*  
4/24/18

Scale:  
N.T.S.

Drawing:



## HIGH ANTENNA INSTALLATION DETAIL

Approved  
by:

*[Signature]*

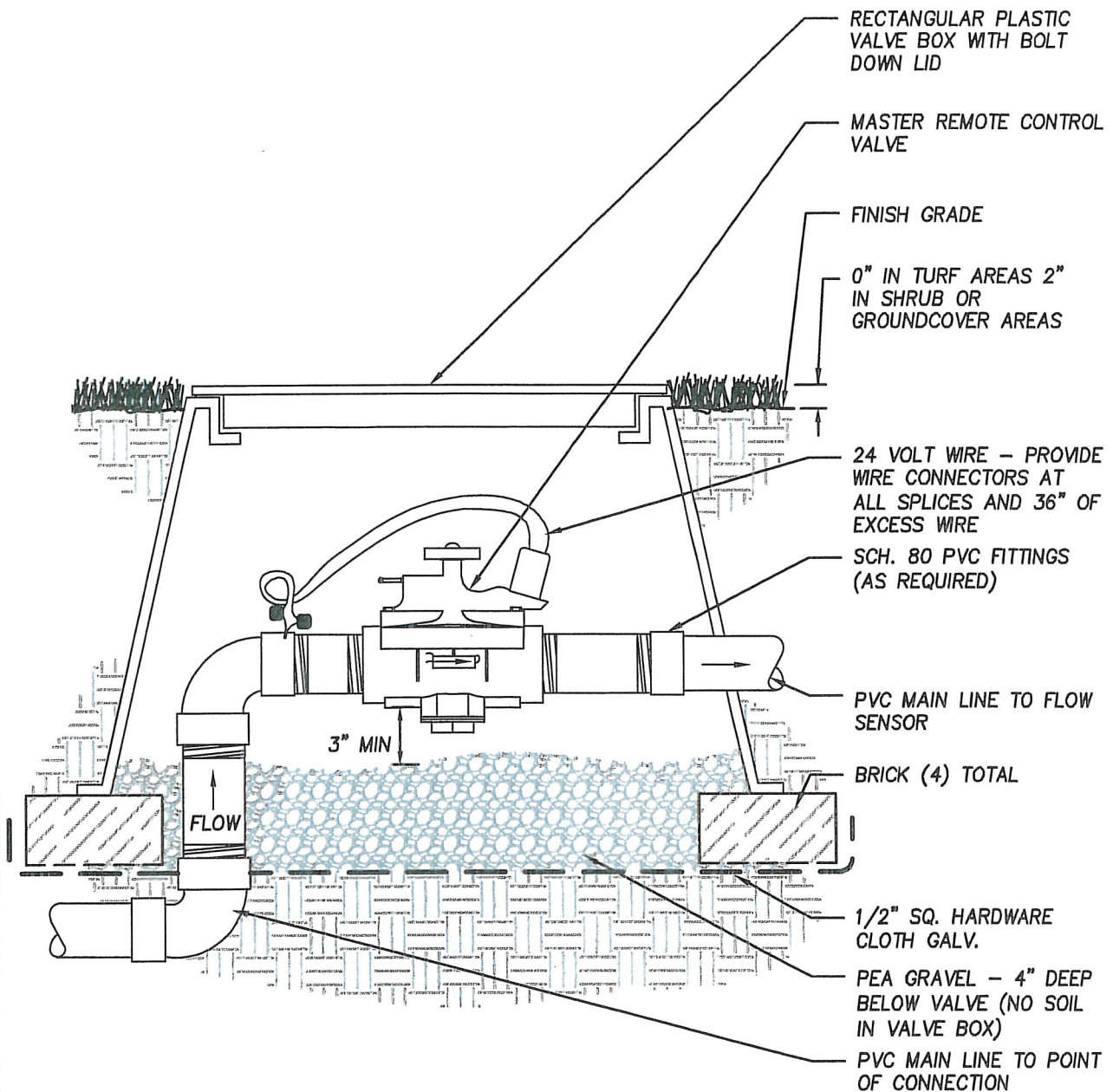
Scale:  
N.T.S.

Date: 12/18/2017

4/24/18

Drawing:





## MASTER REMOTE CONTROL VALVE

Approved  
by:

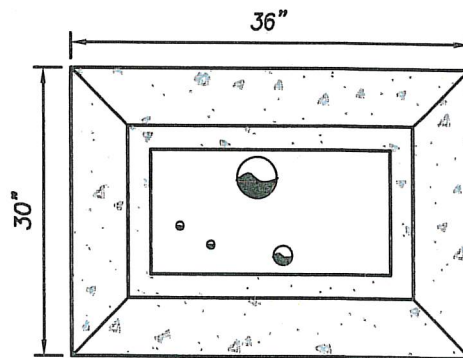
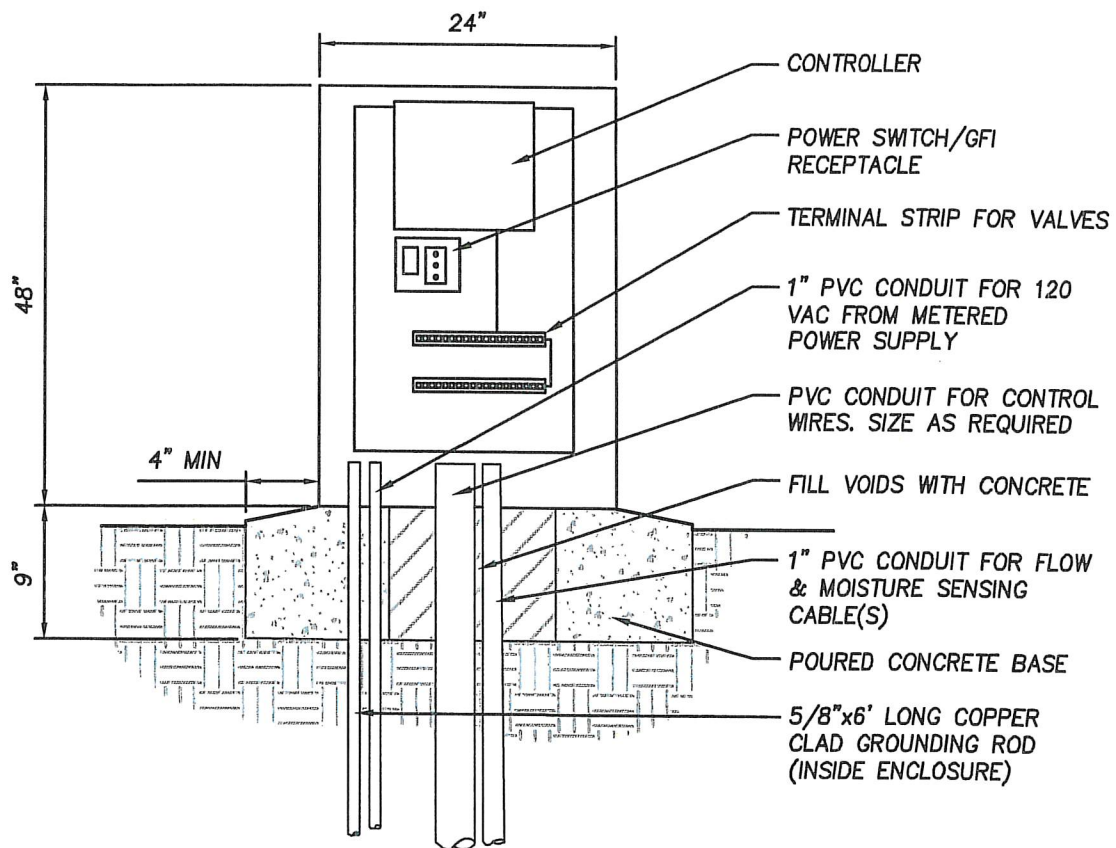
*W. J. J.*

Scale:  
N.T.S.

Date: 12/18/2017

4/24/18

Drawing:



## METERED CONTROLLER ENCLOSURE - FRONT VIEW



Approved  
by:

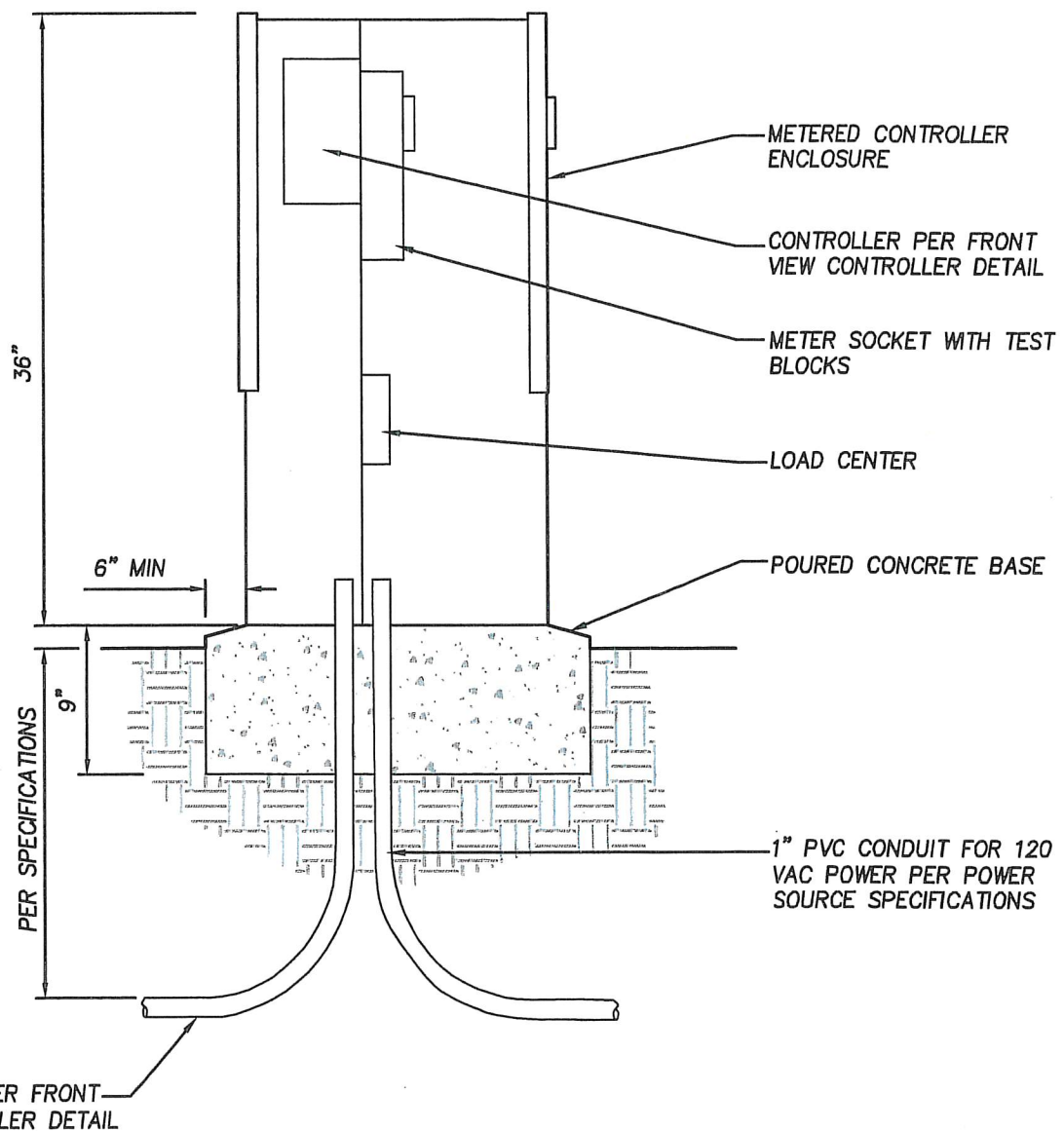
*W. J. [Signature]*

Scale:  
N.T.S.

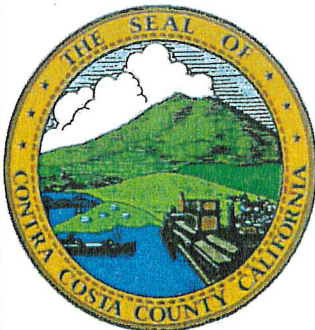
Date: 12/18/2017

4/24/18

Drawing:



## METERED CONTROLLER ENCLOSURE - SIDE VIEW



Approved  
by:

*[Signature]*

Scale:  
N.T.S.

Date: 12/18/2017

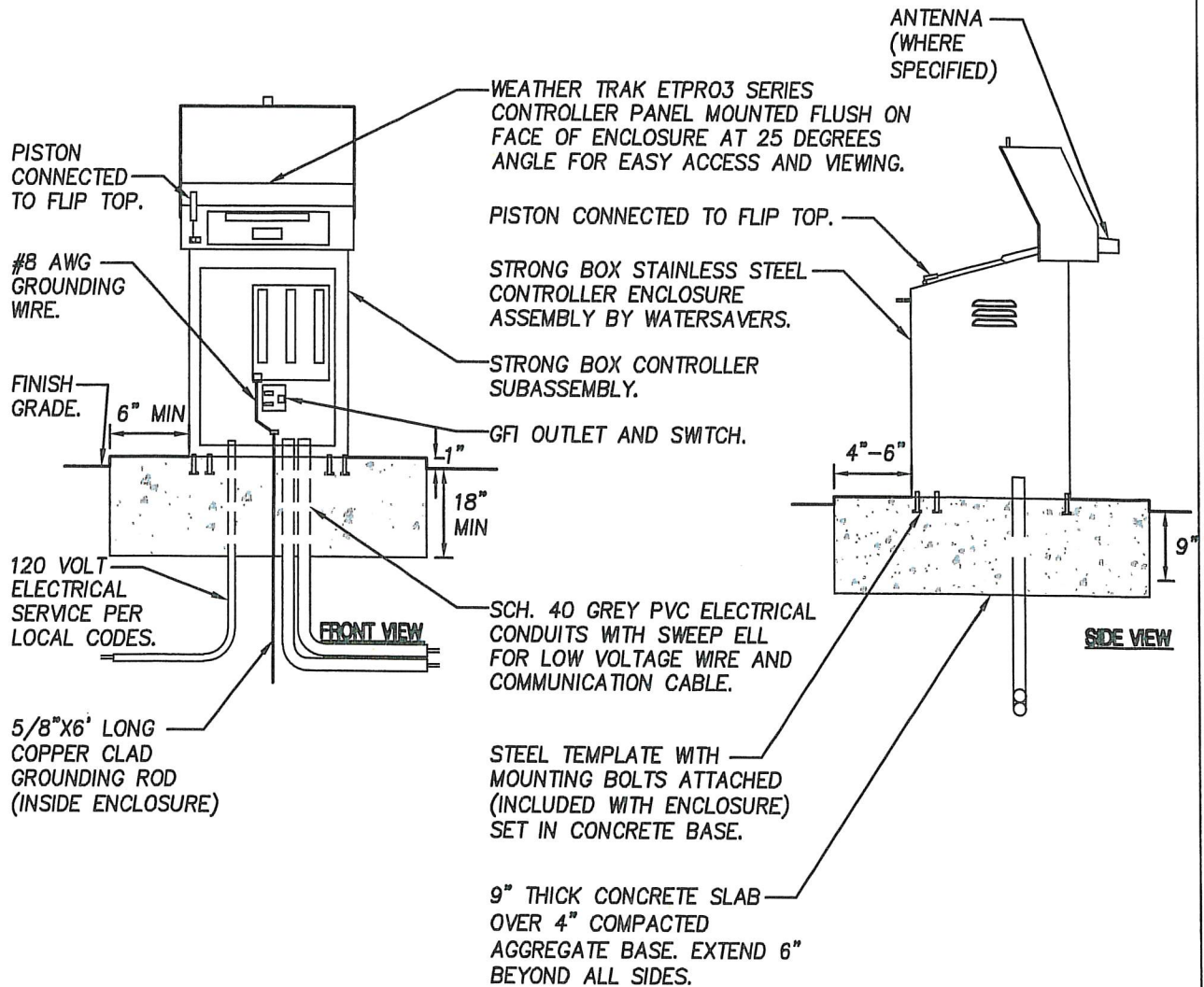
*4/24/18*

Drawing:



NOTES:

ENTIRE CONTROLLER AND ENCLOSURE ASSEMBLY IS TO BE PRE-ASSEMBLED BY WATER SAVERS (WS) SEE PLANS FOR MODEL NUMBERS.



# PEDESTAL MOUNT CONTROLLER COUNTY MAINTAINED

Approved  
by:

*W. J.*

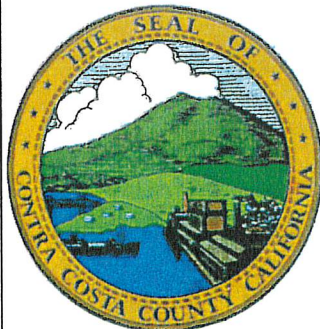
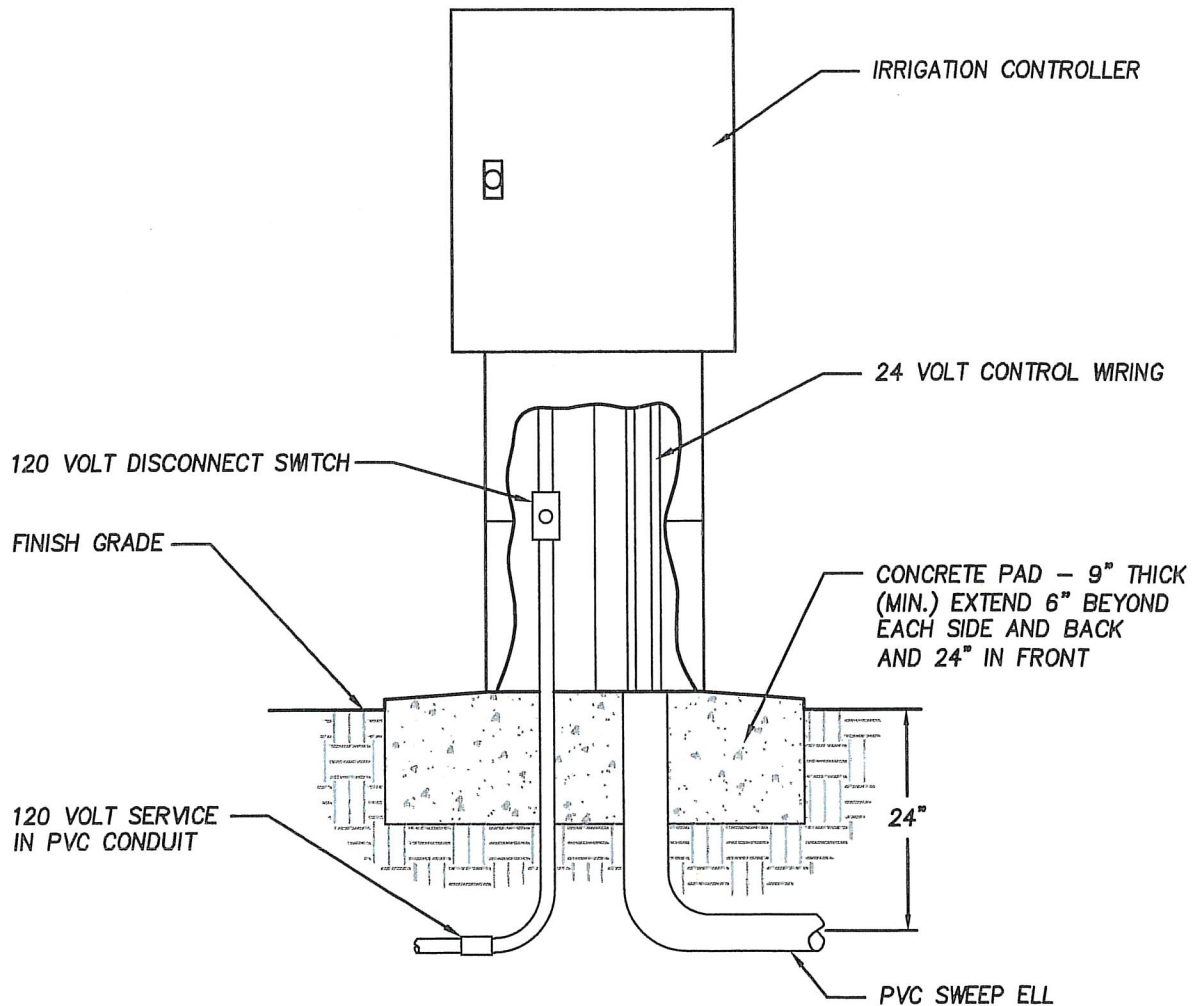
Scale:

N.T.S.

Date: 12/18/2017

*4/24/18*

Drawing:



## PEDESTAL MOUNT CONTROLLER NON-COUNTY MAINTAINED

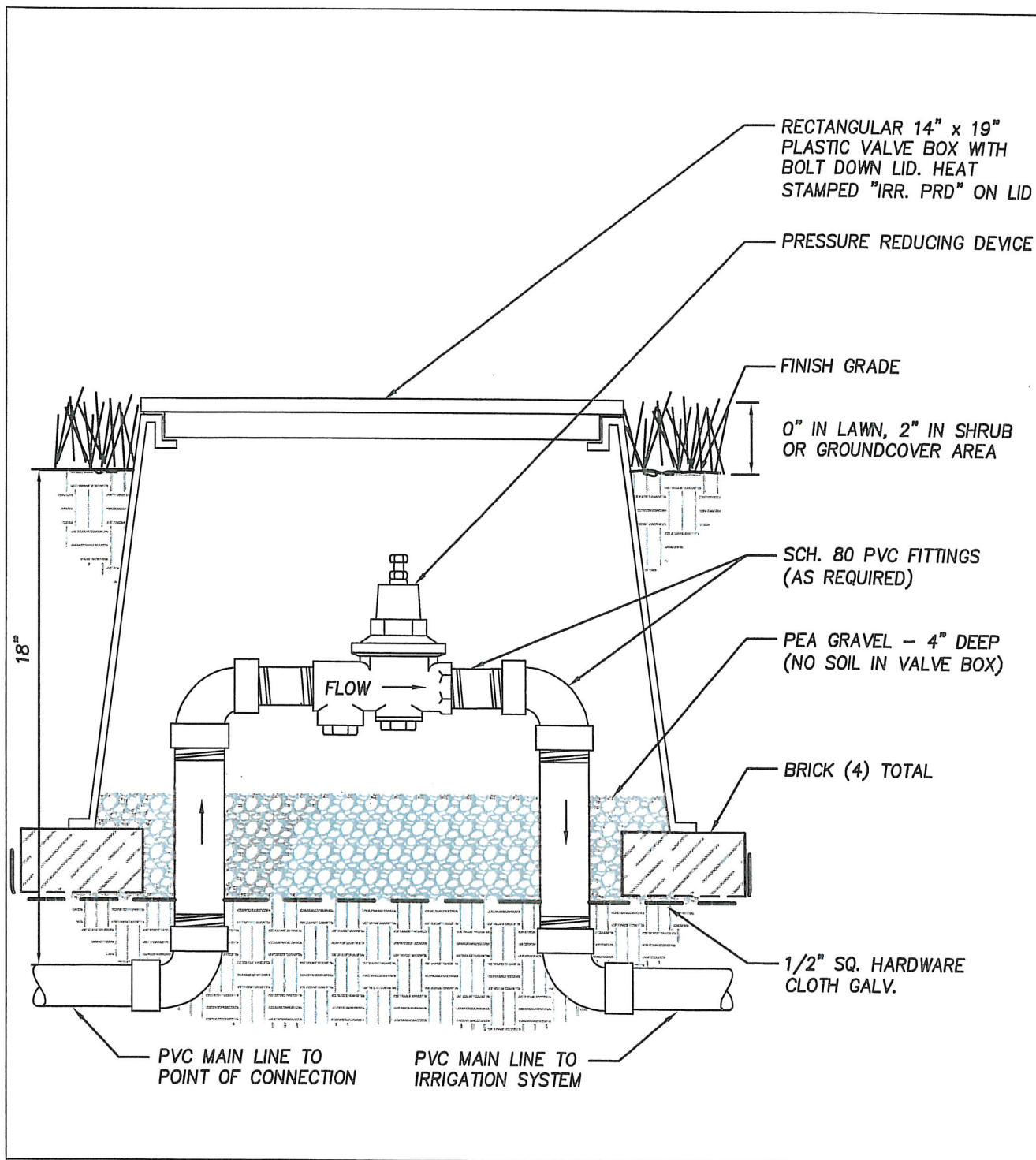
Approved  
by:

*Waf*  
4/24/18

Scale:  
N.T.S.

Date: 12/18/2017

Drawing:



## PRESSURE REGULATOR

Approved  
by:

*Waf*

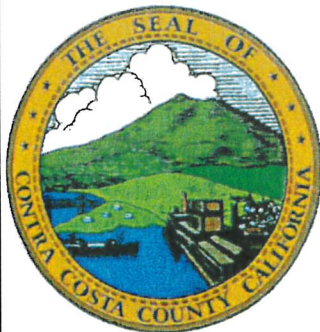
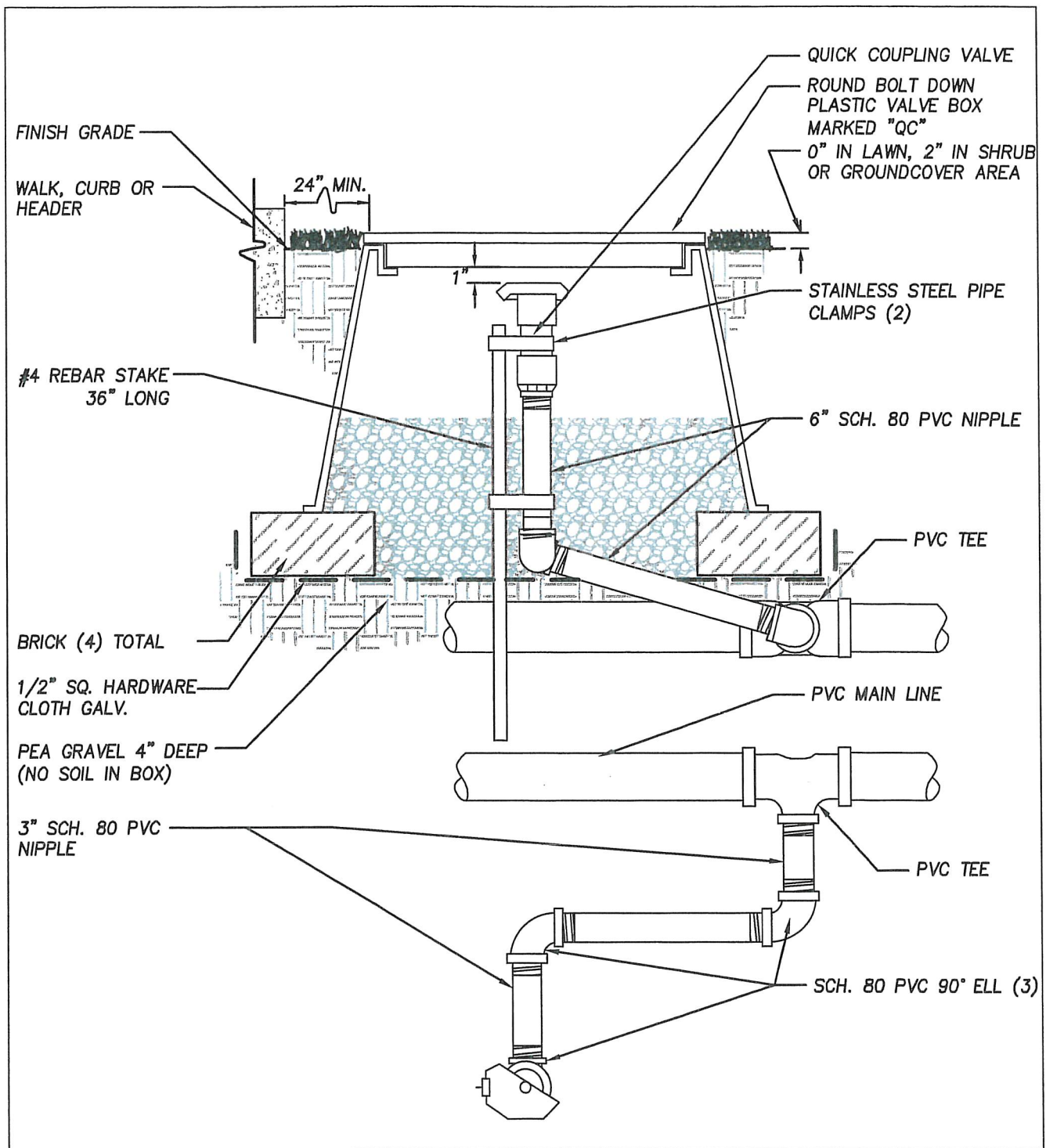
Scale:  
N.T.S.

Date: 12/18/2017

4/24/18

Drawing:





## QUICK COUPLER VALVE

Approved  
by:

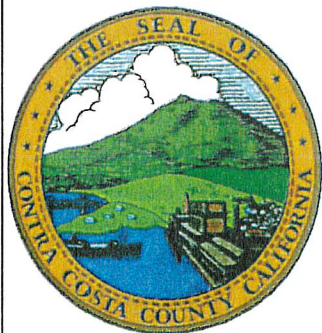
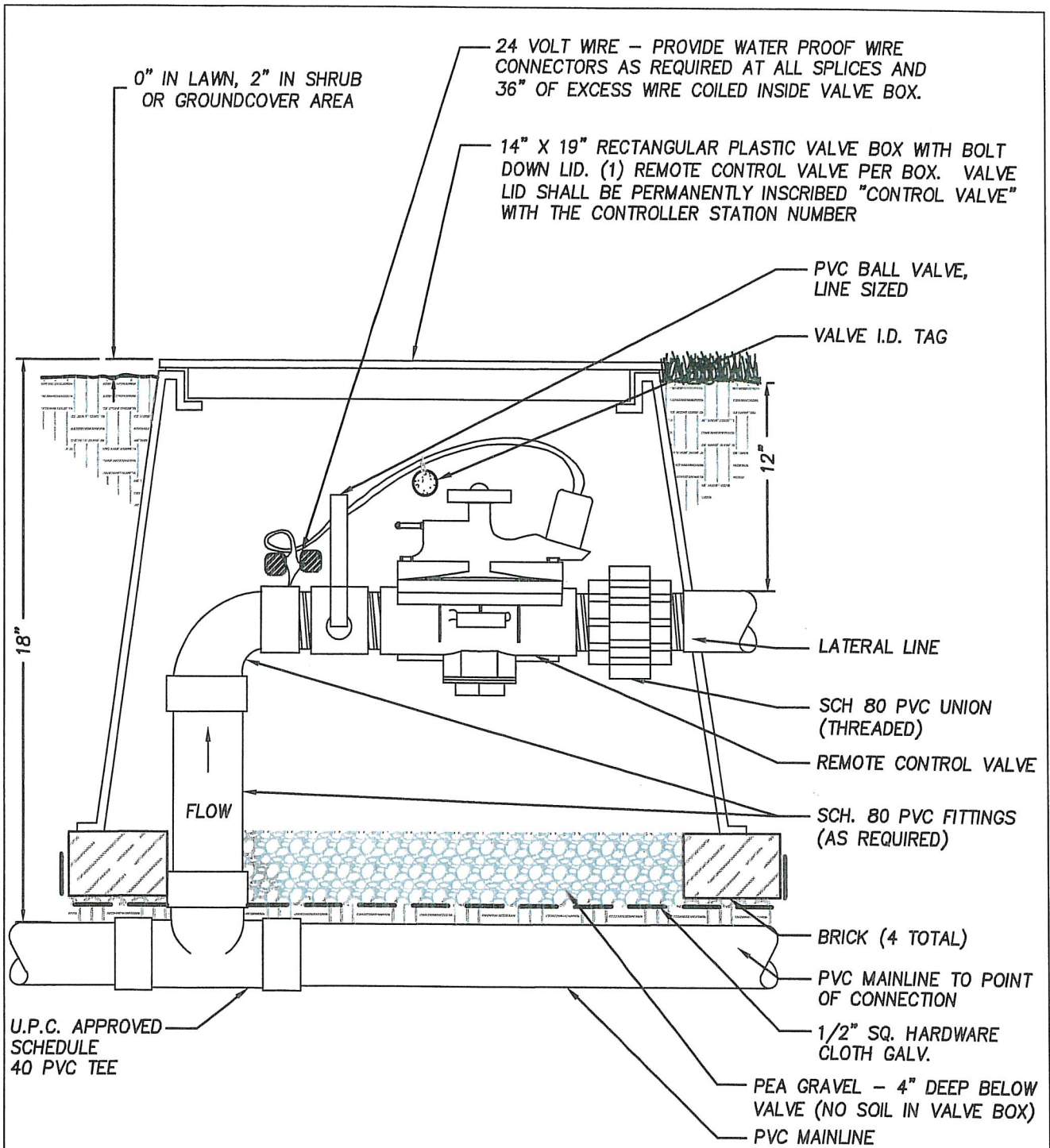
*[Signature]*

Scale:  
N.T.S.

Date: 12/18/2017

4/24/18

Drawing:



## REMOTE CONTROL VALVE

Approved  
by:

*W. J. [Signature]*

Scale:  
N.T.S.

Date: 12/18/2017

4/24/18

Drawing:

ROTARY SPRINKLER

STAINLESS STEEL PIPE  
CLAMPS (2)

FINISH GRADE

#4 REBAR STAKE 36" LONG

SCH. 80 PVC NIPPLE

3/4" STREET ELLS (2)

SCH. 80 NIPPLE  
(LENGTH AS REQUIRED)

3/4" STREET ELL

PVC TEE

PVC LATERAL LINE

12" MINIMUM



## SHRUB ROTOR ON RISER

Approved  
by:

Scale:  
N.T.S.

Date: 12/18/2017

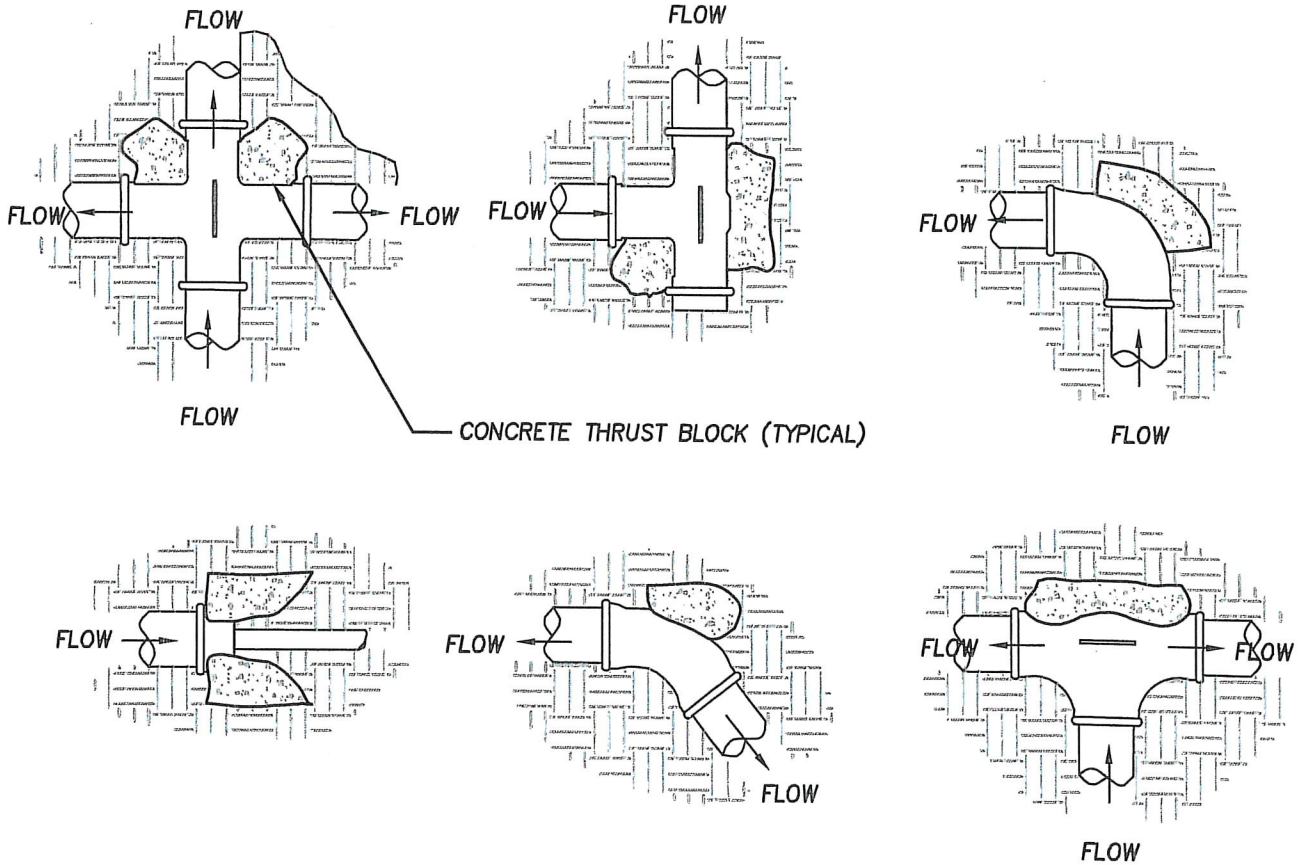
4/24/18

Drawing:



NOTES:

INSTALL MAIN LINE AS PER MANUFACTURERS INSTALLATION GUIDELINES. SIZE OF CONCRETE THRUST BLOCKS SHALL BE PER MANUFACTURERS INSTALLATION GUIDELINES



## THRUST BLOCK

Approved  
by:

*Ny*  
4/24/18

Date: 12/18/2017

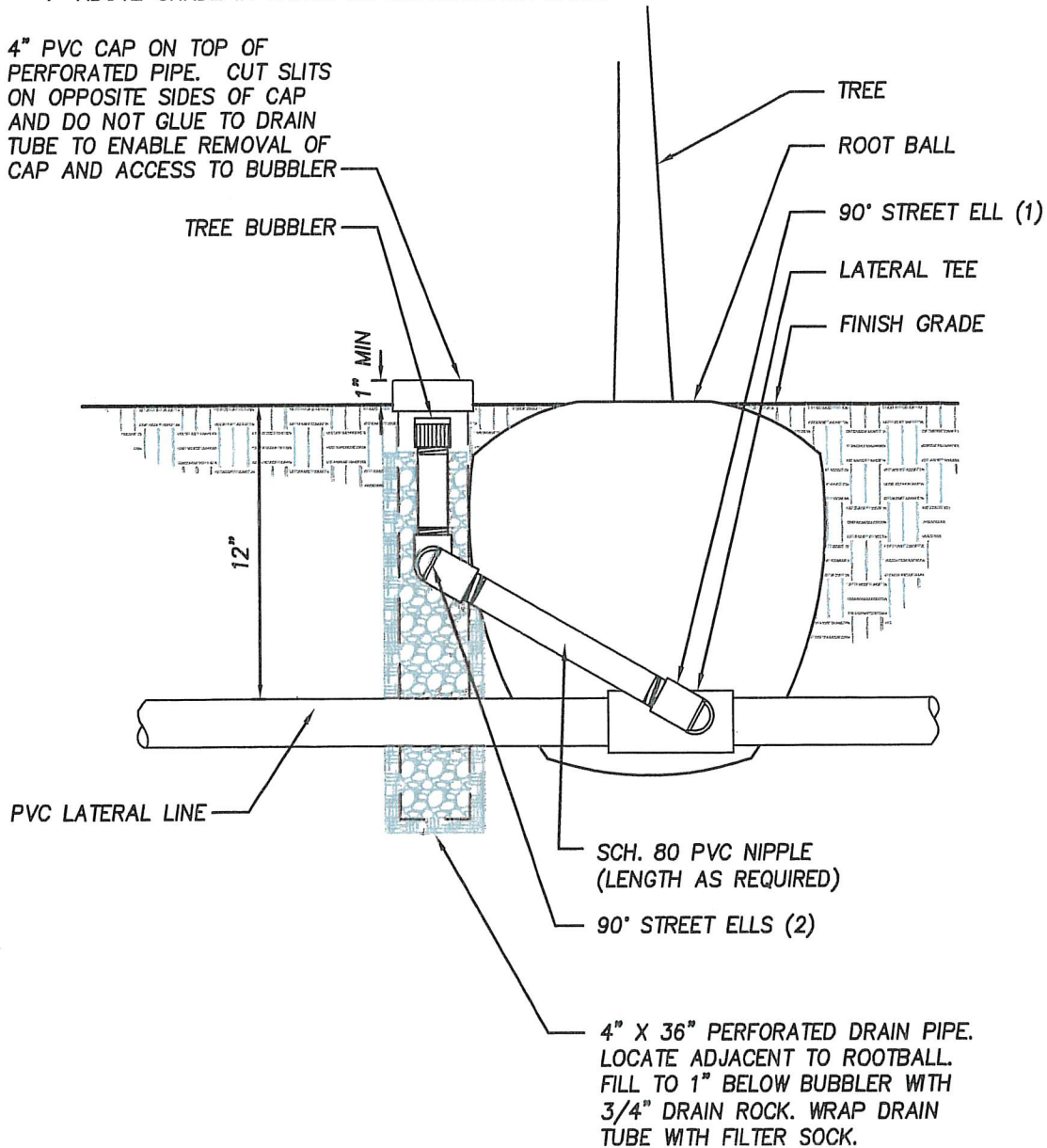
Scale:  
N.T.S.

Drawing:

NOTES:

1. ONE BUBBLER PER TREE TO BE PLACED UPHILL SIDE OF ROOTBALL.
2. TOP OF DRAIN TUBE SHALL BE AT GRADE IN LAWN AREAS AND 1" ABOVE GRADE IN SHRUB OR GROUND COVER AREA.

4" PVC CAP ON TOP OF PERFORATED PIPE. CUT SLITS ON OPPOSITE SIDES OF CAP AND DO NOT GLUE TO DRAIN TUBE TO ENABLE REMOVAL OF CAP AND ACCESS TO BUBBLER



## TREE BUBBLER

Approved  
by:

*[Signature]*

Scale:  
N.T.S.

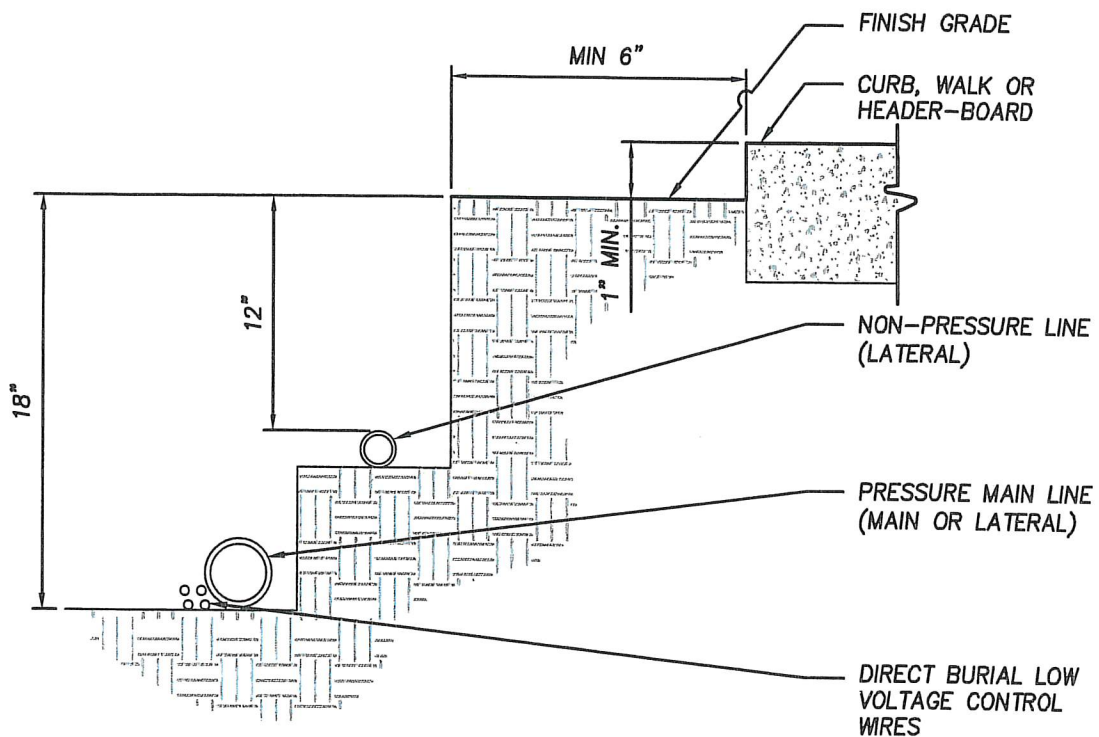
Date: 12/18/2017

4/24/18

Drawing:

NOTES:

1. TRENCHING AND BACKFILLING SHALL BE PER STANDARD SPECIFICATIONS.
2. MINIMUM BACKFILL RELATIVE COMPACTION SHALL BE 90%.
3. BUNDLE CONTROL WIRES TOGETHER AND TAPE TO PIPE AT 10' INTERVALS.
4. 24" MIN. FOR ALL LINES UNDER VEHICULAR PAVING.
5. SNAKE ALL PIPE IN TRENCHES TO COMPENSATE FOR CONTRACTION & EXPANSION.
6. INSTALL SAND BACKFILL 2" BELOW AND 6" ABOVE PIPE IN ROCKY TERRAIN.



## TRENCHING

Approved  
by:

*[Signature]*

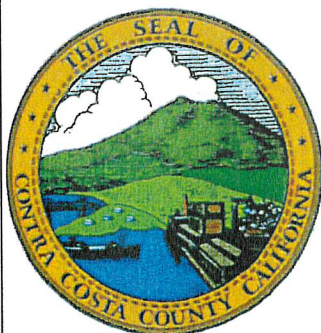
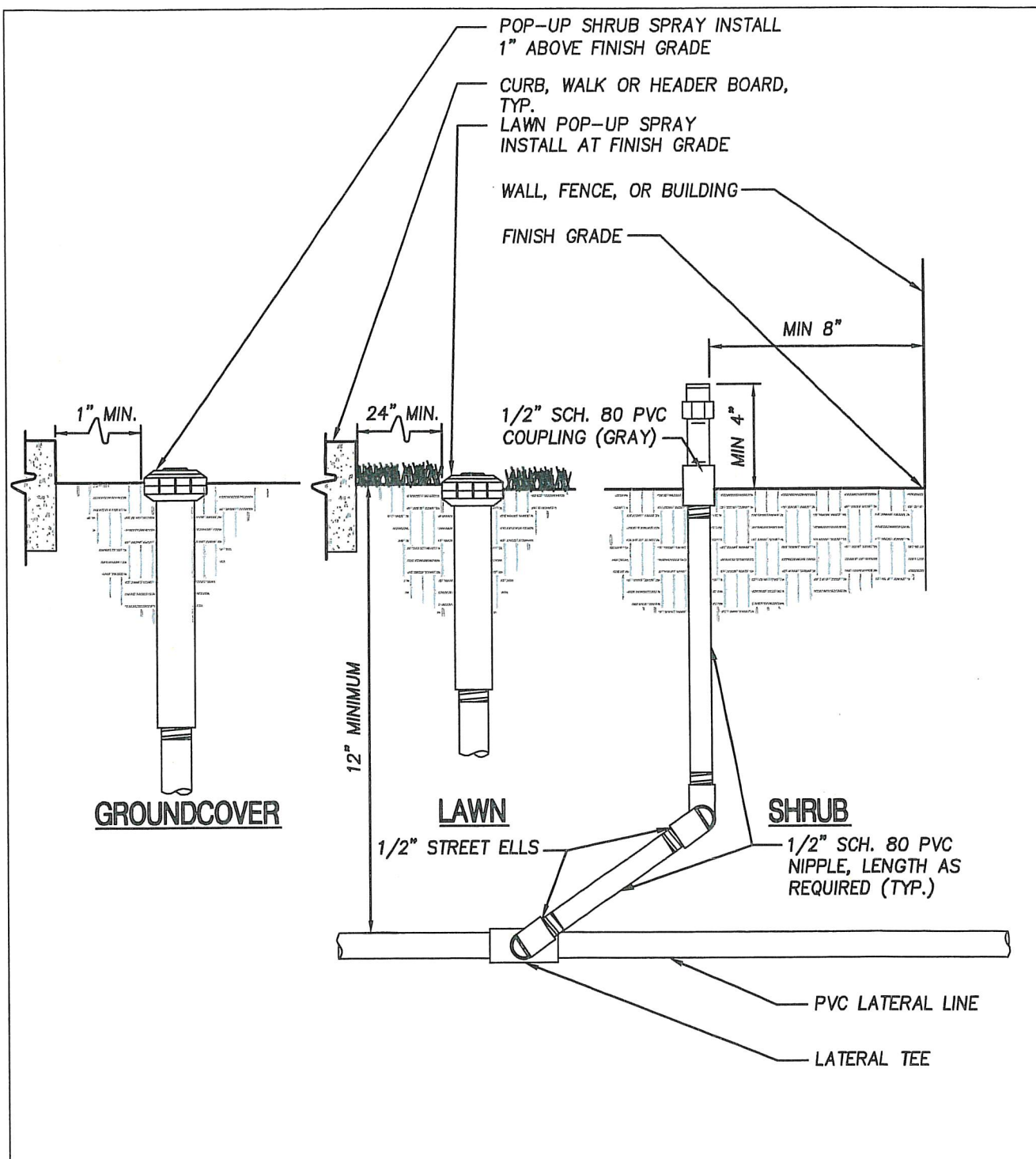
Scale:  
N.T.S.

Date: 12/18/2017

4/24/18

Drawing:





## TYPICAL SPRINKLER RISER

Approved  
by:

*[Signature]*

Scale:  
N.T.S.

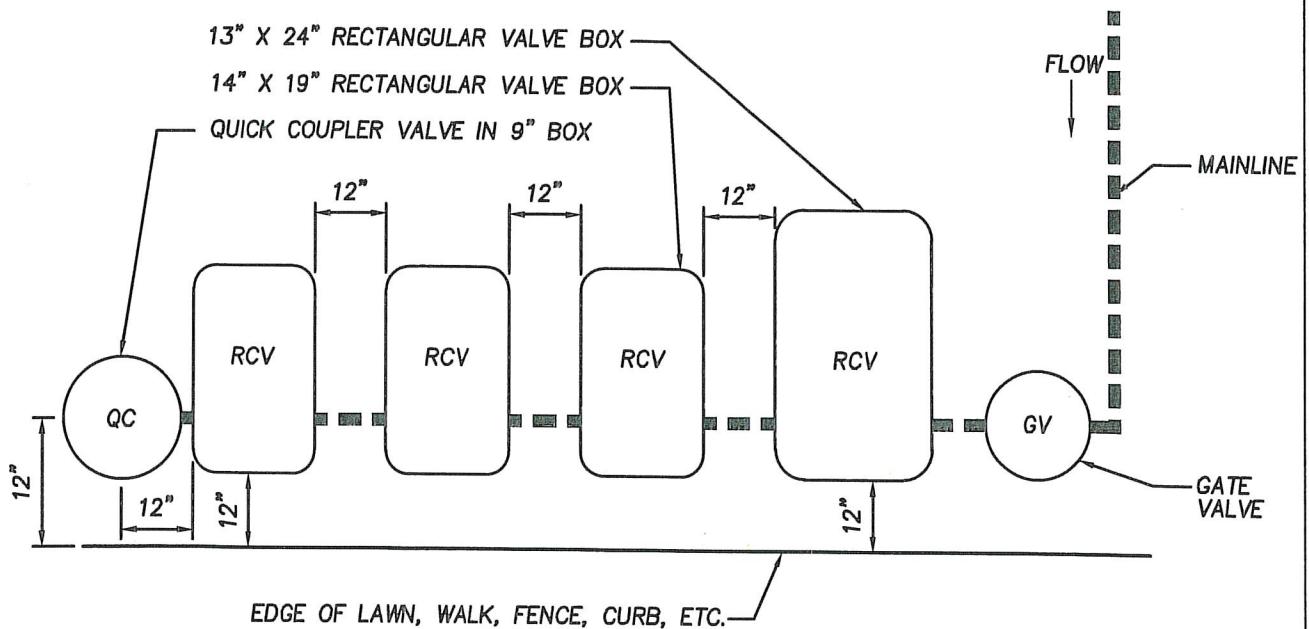
Date: 12/18/2017

4/24/18

Drawing:

NOTES:

1. CENTER VALVE BOX OVER REMOTE CONTROL VALVE TO FACILITATE SERVICING VALVE.
2. SET BOXES 1" ABOVE FINISH GRADE OR MULCH COVER IN GROUNDCOVER/SHRUB AREA AND FLUSH WITH FINISH GRADE IN TURF AREA.
3. SET RCV AND VALVE BOX ASSEMBLY IN GROUNDCOVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN AREA ONLY IF GROUNDCOVER DOES NOT EXIST ADJACENT TO LAWN.
4. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE.
5. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOX EDGES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
6. ALL VALVE BOXES SHALL HAVE BOLT DOWN LIDS.
7. VALVE LID SHALL BE PERMANENTLY INSCRIBED "CONTROL VALVE" AND WITH THE CONTROLLER STATION NUMBER.



## VALVE BOX

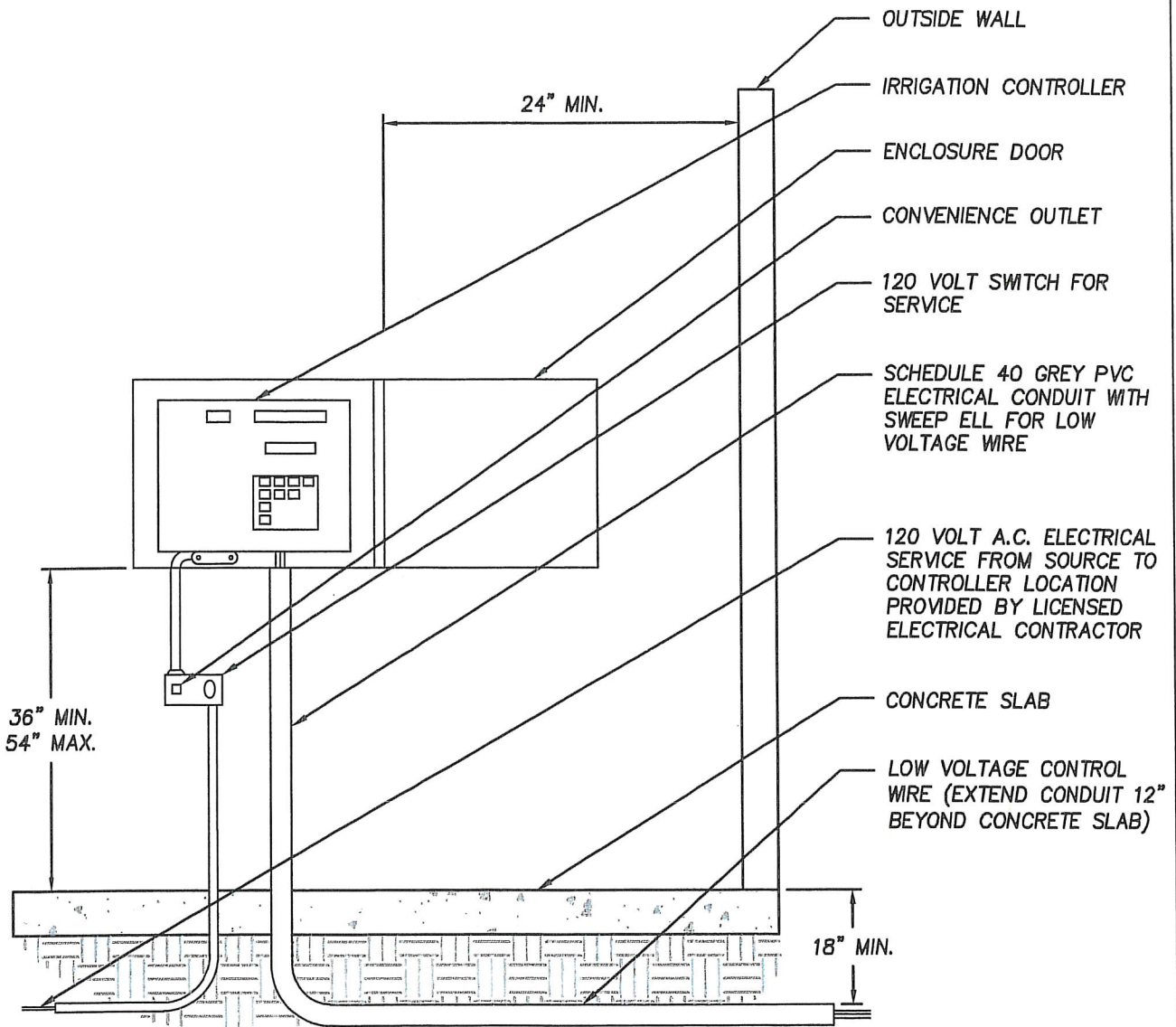
Approved  
by:

Scale:  
N.T.S.

Date: 12/18/2017

4/24/18

Drawing:



## WALL MOUNT CONTROLLER NON-COUNTY MAINTAINED

Approved  
by:

*[Signature]*

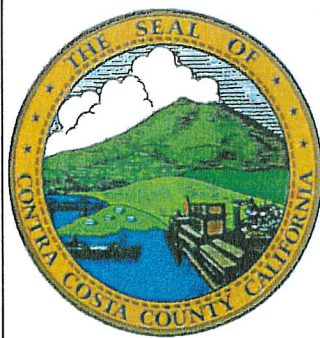
Scale:  
N.T.S.

Date: 12/18/2017

*4/24/18*

Drawing:





Approved  
by:

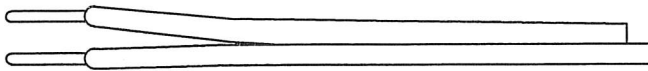
4/24/18

Scale: N.T.S.

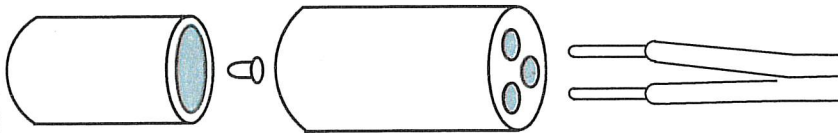
**Drawing:**

NOTES:

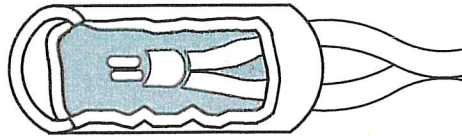
1. ONE CONNECTOR HANDLES #10 AWG, #12 AWG AND #14 AWG WIRES.
2. WIRE CONNECTORS WILL ACCEPT THREE WIRE OR TWO WIRE CONNECTIONS.
3. REFER TO CONTRA COSTA COUNTY STANDARDS FOR ACCEPTABLE MANUFACTURER.



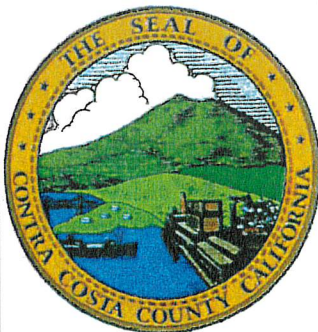
STRIP WIRES APPROXIMATELY  
5/8" FROM END



INSERT WIRES THROUGH HOLES  
IN BASE OF BODY



TWIST STRIPPED WIRES  
TOGETHER AND APPLY CRIMP  
SLEEVE WITH AN INDENT TYPE  
CRIMPING TOOL. PUSH WIRES  
BACK INTO BODY. INVERT  
BODY AND INSERT PLUG INTO  
BODY UNTIL IT SNAPS TIGHT.



## WIRE CONNECTOR

Approved  
by:

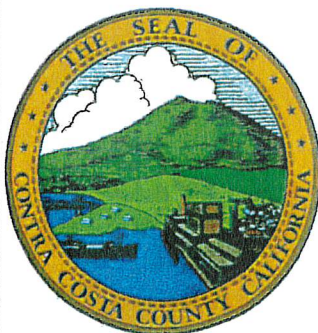
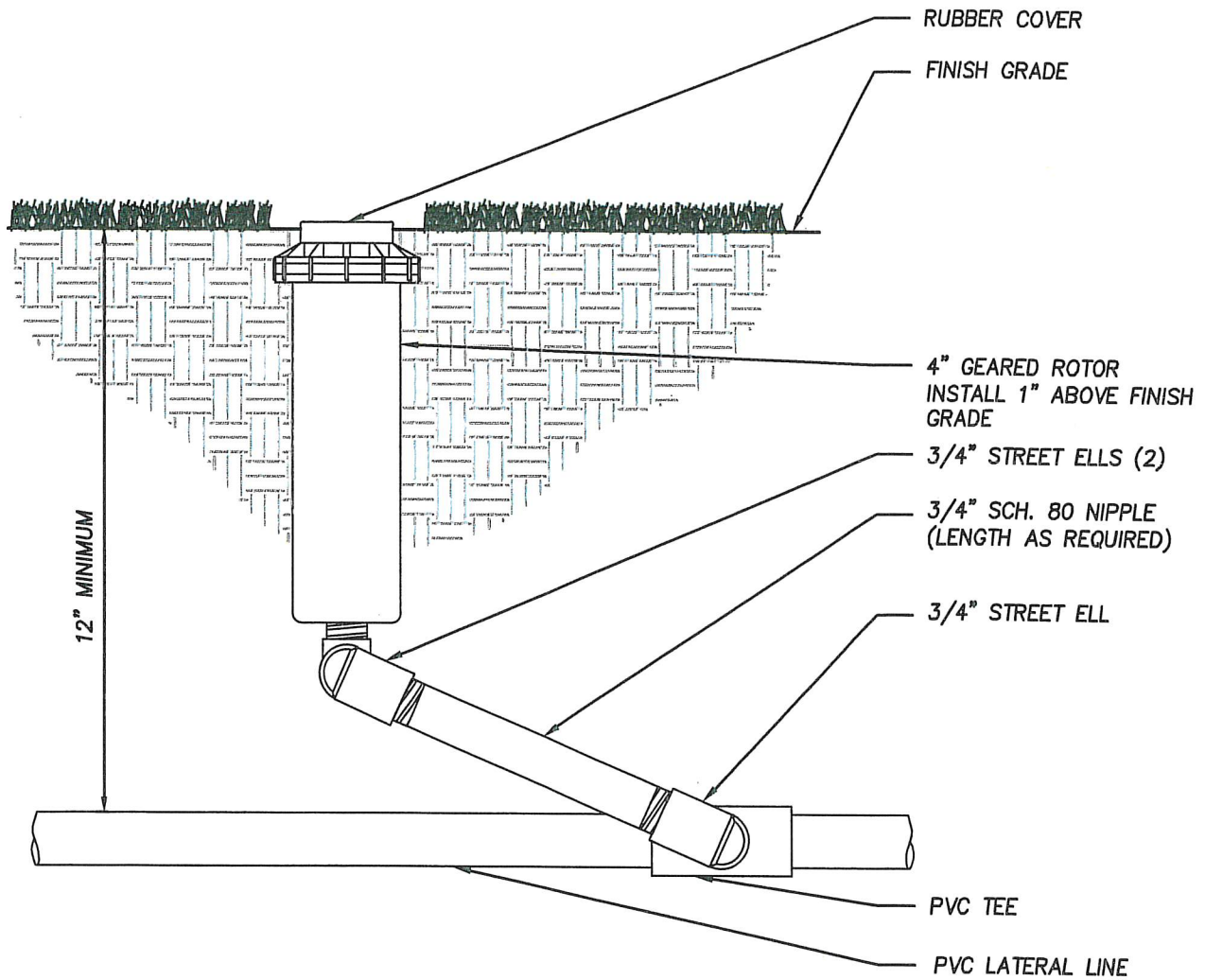
A handwritten signature in blue ink, appearing to be "N. R.", written over the signature line.

Scale:  
N.T.S.

Date: 12/18/2017

4/24/18

Drawing:



## 4" POPUP ROTOR

Approved  
by:

*[Signature]*

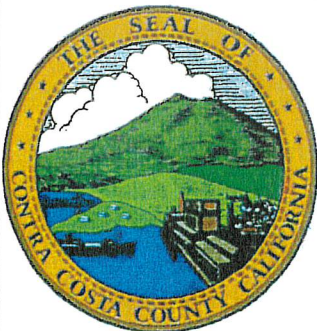
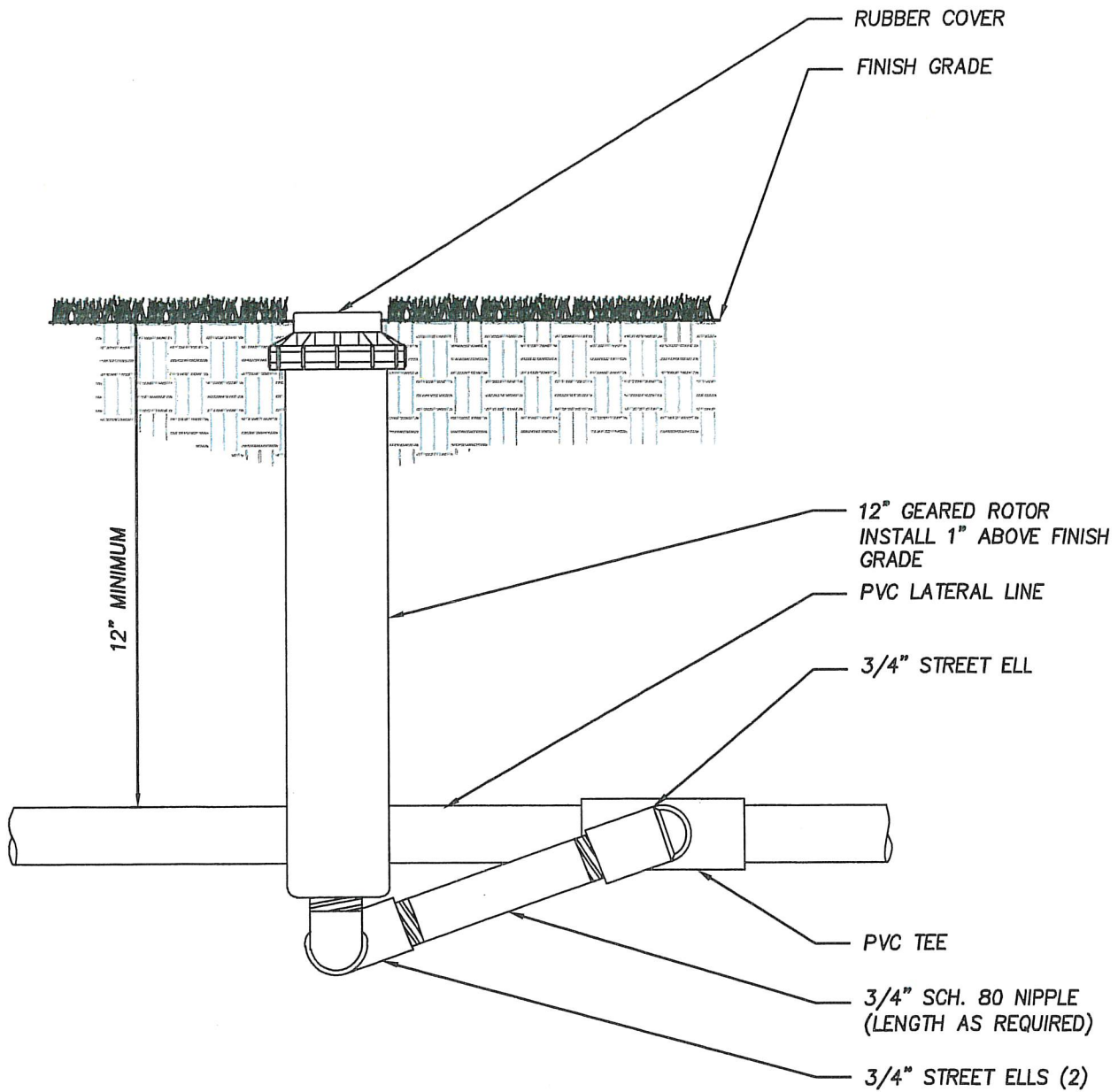
Scale:  
N.T.S.

Date: 12/18/2017

*4/24/18*

Drawing:





## 12" POPUP ROTOR

Approved  
by:

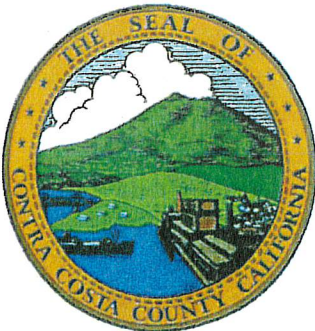
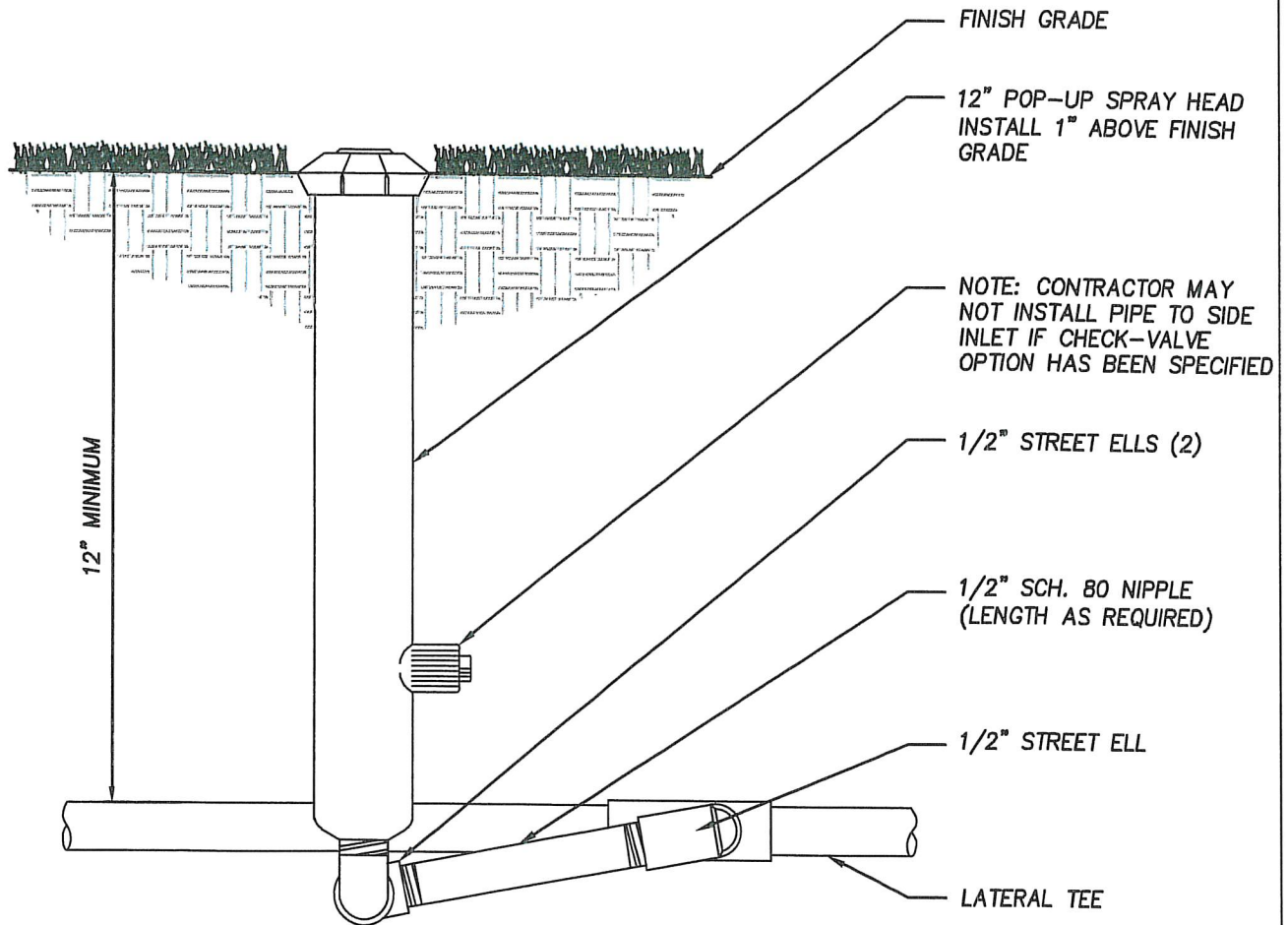
*[Signature]*

Scale:  
N.T.S.

Date: 12/18/2017

*4/24/18*

Drawing:



## 12" POPUP SPRINKLER

Approved  
by:

*[Signature]*

Scale:  
N.T.S.

Date: 12/18/2017

4/24/18

Drawing: